NASA CR-
151160

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Document No. TR-121-026

WSTF No.

Date November 15, 1976

SUMMARY REPORT

DESIGN CERTIFICATION TESTS

HIGH PRESSURE OXYGEN FILTER (HPOF) PROGRAM

(Appendices A, B, and C)

LYNDON B. JOHNSON SPACE CENTER
WHITE SANDS TEST FACILITY
LAS CRUCES, NEW MEXICO

APPENDIX A

ACCEPTANCE TEST PROCEDURE

TP-259

WINTEC

5223 WEST IMPERIAL HIGHWAY
LOS ANGELES, CALIFORNIA 90045
Telephone (213) 641-4300 Telex. 67-3105

ACCEPTANCE TEST PROCEDURE

TP 259

REVISION A

ACCEPTANCE TEST PROCEDURE TP-259

HIGH PRESSURE OXYGEN FILTER

WINTEC PART NUMBER 9-812

FOR

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

CONTRACT NAS 9-14466

APPROVED: F. B. Jones DATE: 2-24-76
F. B. Jones, Laboratory Director

APPROVED: R. Roma DATE: 2-24-76
R. Roma, Quality Assurance Manager

APPROVED: B. A. Wilson DATE: 2-24-76
B. A. Wilson, Chief Engineer

REVISION RECORD

ECL	DESCRIPTION OF CHANGE	DATE	APPROVED
N/C	Initial Release	2-24-76	FB Jones
A	Page 3: Added Figure 5 callout. Page 8: Para 4.1.2: was E.B. Weld Para 4.1.3: Was 2.5 grams Para 4.2.1: Added Figure 5 Para 4.2.3: Was 844 $\pm$ 14Kg per sq. cm. (12000 $\pm$ 200 PSIA) Page 9: Para 4.2.5: Deleted Paragraph Para 4.3.8: Was 1.08 Kg per sq. cm. (20" H_2O) Para 4.3.9: was reduce GN_2 Pressure. Para 4.3.11: was 1.08 Kg per sq. cm. (20" H_2O). ...0.0127 Kg per sq. cm. (5" H_2O). Page 10: Para 4.3.13: Added correction data Para 4.4.1.1: Revised flow rates per Para 4.4.2.1: Nasa letter Aug 3, 1976. Para 11: Para 4.4.2.2: Added max ΔP Page 16: Table 3: Revised Item 3 Data Sheets: Revised to conform to latest configuration and new flow requirements.	9-9-76	FB Jones

TABLE 1

TABLE OF CONTENTS

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1.0 SCOPE

This specification defines the procedures to be used in the Acceptance Testing of the Wintec High Pressure Oxygen Filter, part number 9-812. The objectives of these tests is to provide evidence that the production filters will meet the requirements of the Wintec Detailed Problem Statement SP 3400-103.

2.0 APPLICABLE DOCUMENTS

The following documents and drawings form a part of this specification to the extent specified herein.

2.1. Specifications

Military

MIL-P-27401 B	Propellant Pressurizing Agent, Nitrogen
MIL-C-45662 A	Calibration Standards
MIL-STD-794 B	Parts and Equipment, Procedures for Packaging and Packing of
MIL-STD-834 C	Packaging Data Forms, Instructions for Preparation and Use of.
MIL-P-26514, Type I Class 2, 1.5 lbs. per cubic foot Density	Polyurethane Foam, Rigid or Flexible for Packaging.

NASA

JSC-SN-C-0005	Contamination Control Requirement for the Space Shuttle Program
TT-I-735 A Amendment 2	Isopropyl Alcohol (Isopropanol)
MSFC-SPEC-237 A	Precision Cleaning Agent (PCA)
NH6000-1 (1A)	Requirements for Packaging, Handling and Transport for Aeronautical and Space Systems, Equipment and Associated Components.

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Federal

Fed Spec PPP-B-636 a. Type CF, Class Domestic b. Type CF, Class Weather Resistant	Box Fiberboard
L-P-278, Type II Grade B, Finish I	Plastic Sheet and Strip, Thin Gage, Polyethylene.

Society of Automotive Engineers

ARP-598 1 March 1960	Determination of Particulate Contamination of Hydraulic Fluids by Particle Count Method.
ARP-599 A 2 Oct. 1972	Dynamic Test Method for Determining the Degree of Cleanliness of the Down Stream Side of Filter Elements.
ARP-901	Bubble Point Test Method.

Rockwell International

MB096-005	Material Cleanliness, Precision Packaging.
MB085-006	Film Transparent Precision Clean Packaging (Tinted).

Wintec

SP3400-103	High Pressure Oxygen Filter, Detailed Problem Statement of

2.2 Drawings

9-812	High Pressure Oxygen Filter (HPOF)
4-2498	Flow & Proof Fixture
4-2499	Bubble Point Fixture

3.0 TEST CONDITIONS

3.1 Standard Conditions

Unless otherwise specified, all tests will be conducted under the following ambient conditions:

Temperature:	70° ± 20°F
Relative Humidity:	80% Maximum
Barometric Pressure:	Local Atmospheric

3.2 Test Equipment

The required instrumentation will be as shown in the schematic diagrams of Figure 1 through Figure 3.

Refer to Table 3 for instrument type, accuracy, range and calibration frequency. All instrument calibrations meet the standards of calibration of MIL-C-45662 with traceability to N. B. S.

System cleanliness to conform to the cleanliness requirements of this specification and specification WSQ-005.

3.3 Test Fluids

Nitrogen per MIL-P-27401 or equivalent.
Isopropyl Alcohol per TT-I-735, Grade B.
Precision Cleaning Agent (PCA) per MSFC-SPEC-237 or equivalent.

All test fluids entering the HPOF will be prefiltered through a 2 micron absolute (or finer) filter.

3.4 Data

A continuous test log will be maintained for each test specimen. The log shall contain a record of all operations and tests performed and the resultant data for each test. See Appendix 1 for test log forms.

3.5 Test Discrepancies

3.5.1 The failure of any portion of the test equipment will not constitute failure of the unit being tested. The test sequence may be continued at the discretion of the cognizant test engineer if the failure does not represent a danger to the facility, test personnel, the unit undergoing test, or invalidate the required test objectives.

3.5.2 Failure Notification

In the event that the unit under test exhibits any failure or deviation from the test requirements set forth in this procedure, notify Mr.Irwin Smith, NASA-JSC, White Sands Test Facility, Las Cruces, N. M., that a test failure has occurred as follows:

a) Notify Mr.I. Smith, Telephone (505) 524-5522 within 24 hours after failure occurance.

b) Prepare and submit a written failure report within seven (7) calendar days.

TABLE 2

ACCEPTANCE TEST SEQUENCE

Sequence Number	Description	TP 259 Paragraph
1	Inspection of Product	4.1
2	Proof Pressure	4.2
3	Bubble Point	4.3
4	Flow-ΔP	4.4
5	Cleanliness Verification	4.5
6	Drying	4.6
7	Final Inspection	4.7
8	Packaging	5.0

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3.6 Test Notification

The Mr. I. Smith, NASA-JSC, White Sands Test Facility, and the Government Inspector, as required by the applicable purchase order, shall be notified at least 48 hours prior to the performance of any scheduled test so that authorized representatives may witness the test as required.

4.0 TEST PROCEDURE

Unless otherwise specified, the acceptance tests are to be performed on all deliverable HPOF assemblies prior to delivery. The tests are to be performed in the sequence shown in Table 2.

4.1. Inspection of Product

4.1.1 Each HPOF assembly (P/N 9-812) shall be inspected for conformance with the drawing requirements. The areas of inspection shall cover:

Finish
Workmanship
Dimensions
Identification
Certified Materials and Processes

A 4.1.2 Inspect the TIG weld that joins the two 20-1265 rings with a 40X binocular microscope. There shall be no cracks or breaks in the welds.

A 4.1.3 Measure the weight of each HPOF assembly to the nearest 10 milligram and record the weight. The weight of the HPOF shall not exceed 7.0 grams.

4.2 Proof Pressure

A 4.2.1 Install the HPOF into Fixture 4-2498 as shown in Figure 5.

4.2.2 Install the HPOF and 4-2498 fixture into a proof pressure test system as shown in Figure 1.

A 4.2.3 With the outlet of the 4-2498 Fixture vented to atmosphere, pressurize the inlet of the fixture to $668 \pm {}^{0}_{7}$ Kg per sq. cm. ($9500 \pm {}^{0}_{100}$ psia) with GN_2. Maintain this pressure for $5 \pm {}^{0}_{1}$ minutes. Reduce the pressure to atmosphere by venting the inlet side of the HPOF.

4.2.4 The HPOF shall not collapse as a result of this test.

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A 4.2.5 DELETED

4.3 Bubble Point

4.3.1 The 4-2499 fixture and transfer tube shall be flushed with IPA that has been filtered through a 0.8 micron or finer membrane.

4.3.2 Install the HPOF into Fixture 4-2499.

4.3.3 Measure and record the surface tension and temperature of the Isopropanol (IPA) that will be used.

4.3.4 Prefilter Isopropanol (IPA) through a 0.45 micron membrane. Measure and record the surface tension and temperature of the prefiltered IPA. This IPA is to be reserved for bubble point testing of the HPOF assemblies.

4.3.5 Attach the HPOF and Fixture 4-2499 to a transfer tube. The transfer tube is a part of the Bubble Point Test system, Figure 2.

4.3.6 Using a Hypodermic syringe, fill the transfer tube with IPA (reference paragraph 4.3.4).

4.3.7 Attach the transfer tube to the Bubble Point Test System, Figure 2. The 4-2499 Fixture shall be in a vertical position.

A 4.3.8 Pressurize the HPOF to 1.45 to 1.52 Kg/cm^2 (8 to 14 in. Hg,) 100 to 190 in. H_2O. The IPA in the transfer tube will be forced through the HPOF to wet all internal surfaces of the HPOF. The IPA will rise in and overflow the open port of the 4-2499 fixture. All bubbles of entrapped air shall cease to emit from the test fixture before proceeding with the next step.

A 4.3.9 Reduce GN_2 pressure to 1.068 Kg/cm^2 (1.0 in. Hg, 14 in. H_2O) open valve (A) and allow the excess IPA in the transfer tube to drain out of tube. Close the valve (A).

4.3.10 Assure that the open part of Fixture 4-2499 is filled with IPA.

A 4.3.11 Increase the GN_2 pressure to 1.154 Kg/cm^2 (3.5 in. Hg, 47.6 in. H_2O) for 2 min. Then increase the pressure at a rate of 1.051 Kg/cm^2/minute (0.5 in Hg, 7.0 in. H_2O/minute.) until the first train of bubbles emit from the HPOF. This is the initial (observed) bubble point and shall be recorded. The initial bubble point shall be corrected.

4.3.12 Method for determining surface tension correction factor.

$ST = C \times R \times D$

Where:

ST = Surface Tension - Dynes/cm
C = 16.5 (Capillary Tube Constant)
R = Difference in Rise of Fluid in cm.
D = Density of Fluid at Measured Temp.

4.3.13 Method for correcting the observed bubble point to standard conditions.

$$P_s = (P-dh)\frac{21.15}{ST}$$

Where:

Ps = Standard Bubble Point
P = Observed Bubble Point
(in. Hg x 13.596 = in. H_2O)
(PSID x 27.687 = in. H_2O)
d = Density
h = Immersion Depth, Inches
ST = Measured Surface Tension
21.15 = Standard Surface Tension

4.3.14 The standard bubble point (P_s) shall be greater than (TBD) Kg per sq. cm. (TBD inches of water).

4.3.15 Remove the 4-2499 fixture from the bubble point test system and flow prefiltered (0.45 micron) GN_2 through the HPOF to remove all of the residual IPA.

4.3.16 Remove the HPOF from the 4-2499 fixture.

4.4 Clean Flow- Differential Pressure

4.4.1 Install the 4-2498 flow fixture into a flow system as shown in Figure 3.

A 4.4.1.1 Conduct a tare test to measure the system differential pressure ($\triangle P$) at flow rates 0.045, 0.061, and 0.076 ACFM (1.28, 1.71 and 2.14 SCFM) of GN2 with an inlet pressure of 29.18 Kg per sq. cm. (400 $\pm$ 5 psig). Record the tare $\triangle P$ at each flow rate.

4.4.2 Install the HPOF into the 4-2498 fixture.

A 4.4.2.1 Install the HPOF and 4-2498 fixture into the flow system (reference Figure 3) and conduct a flow-$\triangle P$ test at flow rates of 0.045, 0.061 and 0.076 ACFM (1.28, 1.71 and 2.14 SCFM) of GN_2 with an inlet pressure of 29.18 Kg per sq. cm. (400 $\pm$ 5 psig). Record the $\triangle P$ and temperature at each flow rate. This will be the gross-$\triangle P$ at the three noted flow rates.

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4.4.2.2 Subtract the tare-ΔP from the gross-ΔP for each respective flow rate. The difference will be the net-ΔP for each flow rate. The net-ΔP shall not exceed 300 PSID.

4.4.2.3 Remove the HPOF assembly from the flow system and the 4-2498 flow fixture and set the HPOF aside.

4.5 Cleanliness Verification

4.5.1 Clean the 4-2498 flow fixture by thoroughly flushing with PCA solvent that has been prefiltered through a 0.8 micron or finer filter.

4.5.2 Carefully install the HPOF assembly in the 4-2498 flow fixture. Flush the HPOF in both directions by flowing prefiltered (0.8 micron or finer) PCA through the HPOF.

4.5.3 After flushing the HPOF in both directions, take a sample of the PCA effluent while flowing one direction, then in the other direction. Fifty (50) mil of PCA effluent shall be sampled in each flow direction. The effluent samples may be drawn through a Wintec viewer sampler that has been loaded with a precleaned and pre counted 0.8 micron, 47 min. membrane (Type AA or equivalent). The membrane shall be examined and a particulate count made per the requirements of ARP 598.

4.5.4 The particulate count shall not exceed Table I, Level 25 of JSC-SN-C-0005 as noted below:

Particle Size Range	Particles/100 ml
$\leq$ 5 microns	no silting
5 - 15 microns	19
16 - 25 microns	4
$>$25 microns	0

4.5.5 If the particulate count of paragraph 4.5.4 is exceeded, repeat paragraphs 4.5.2 and 4.5.3 until the HPOF meets the requirements of paragraph 4.5.4.

4.5.6 Remove the HPOF from the 4-2498 fixture.

4.6 Drying

4.6.1 Place the HPOF in a precleaned aluminum dish and place in a vacuum oven. Dry the HPOF at 170 $\pm$ 10 degrees F for 15 minutes without a vacuum and 30 to 45 minutes at a pressure of 25 to 28" Hg.

4.7 Final Inspection

4.7.1 Visually inspect the HPOF assembly before packaging to assure the unit did not sustain any damage as a result of the acceptance testing and handling. Assure that there are no particles on the exterior surfaces of the unit.

5.0 PACKAGING

5.1 Inner Packaging

NOTE: Inner packaging shall be accomplished in the Clean Room.

5.1.1 Insert the unit into a 2 mil tinted nylon "C" Bag (para 2.9) approximately 6 x 3 inches. The inside of the bag shall meet or exceed the requirements of PB095-005, Level 1.

5.1.2 Partially seal bag leaving corner open, evacuate air, and final heat seal bag.

5.1.3 Attach an Inspection Seal over the final heat sealed ends of bag, Figure 4B.

5.1.4 Place the sealed unit into a 6 mil anti-static polyethylene (para 2.10) contamination barrier bag approximately 6 x 3 inches. Insert a Cleanliness/Identification Tag, Figure 4A into bag and partially heat seal bag, evacuate bag, and final heat seal bag. The inside of the bag shall meet or exceed the requirements of PB0295-005, Level 3.

5.2 Unit Packaging

5.2.1 Wrap the packaged unit in a 1/2 inch thick sheet of polyurethane foam. Tape overlap using 1/2 inch wide masking tape.

5.2.2 Place wrapped unit into box (para 2.7a) and seal using reinforced tape.

5.2.3 Stamp side of each box with the following information:

Item Name: High pressure oxygen filter (HPOF)
Manufacturer's Part Number: 9-812
Quanity in Package
Clean Marking: This unit has been cleaned to Table I, Level 25 of JSC-SN-C-0005.
Traceability Identification
Serial Number
Mfg: Wintec Division of Brunswick Corporation
Buyer Purchase Order Number
Date of Packaging

5.3 Shipping Container

5.3.1 Unit packages shall be placed into a Weather Resistance Fiberboard Container.

5.3.2 Test data and associated data shall be enclosed in an envelope and placed inside of the Shipping Container. Close and seal container using gummed reinforced tape.

5.3.3 The container shall be marked with information specified in para 5.2.3.

6.0 DATA PACKAGE

6.1 The data package shall include but not be limited to the following items as applicable:

a) Statement of Certification
b) Visual Inspection Characteristics (data sheets)
c) List of Dimensional Inspection Requirements (data sheets)
d) Copy of Suppliers Shipping Document.

FIGURE 1

PROOF LOADING TEST SET-UP

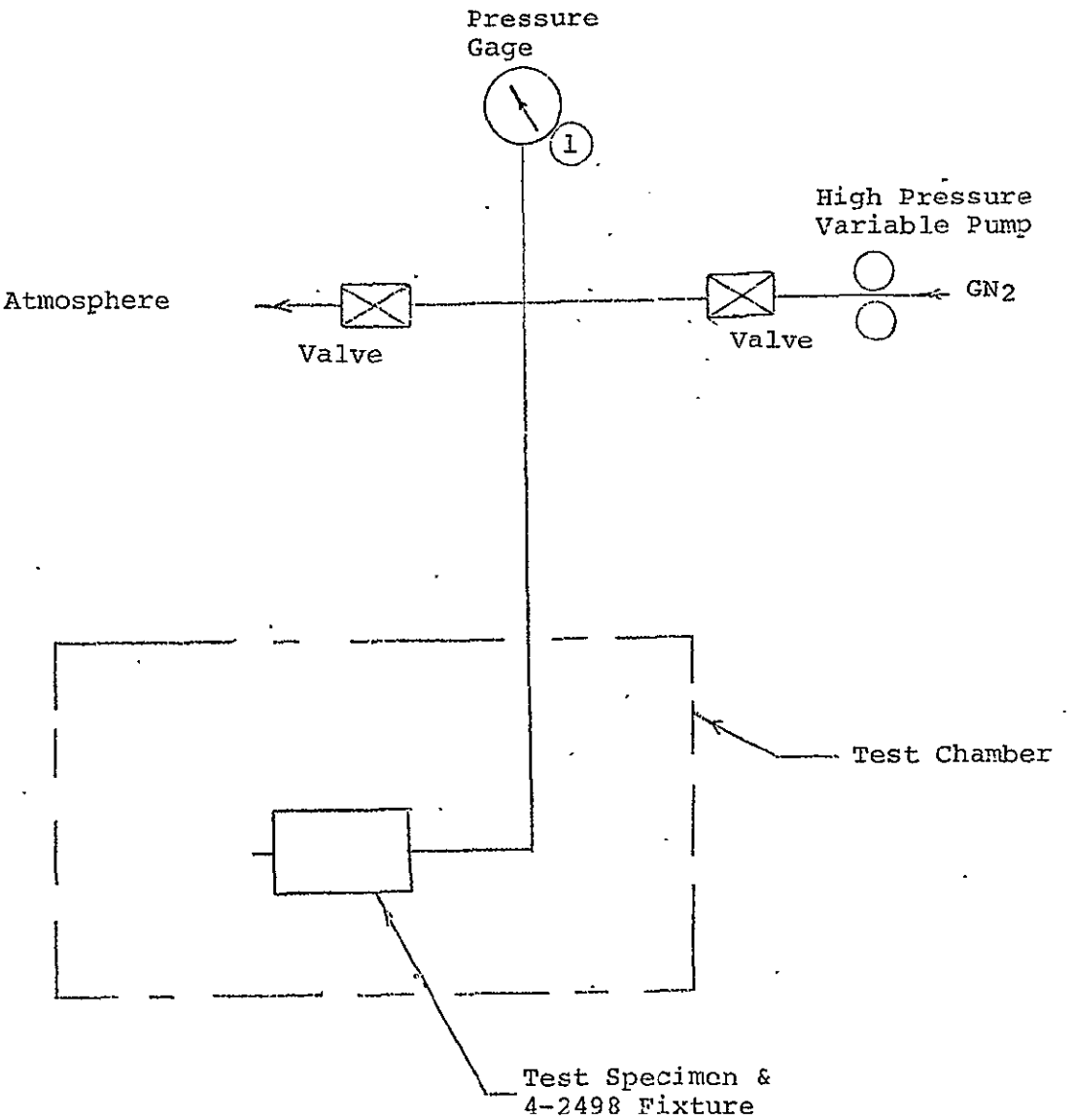

FIGURE 2

BUBBLE POINT TEST SET-UP

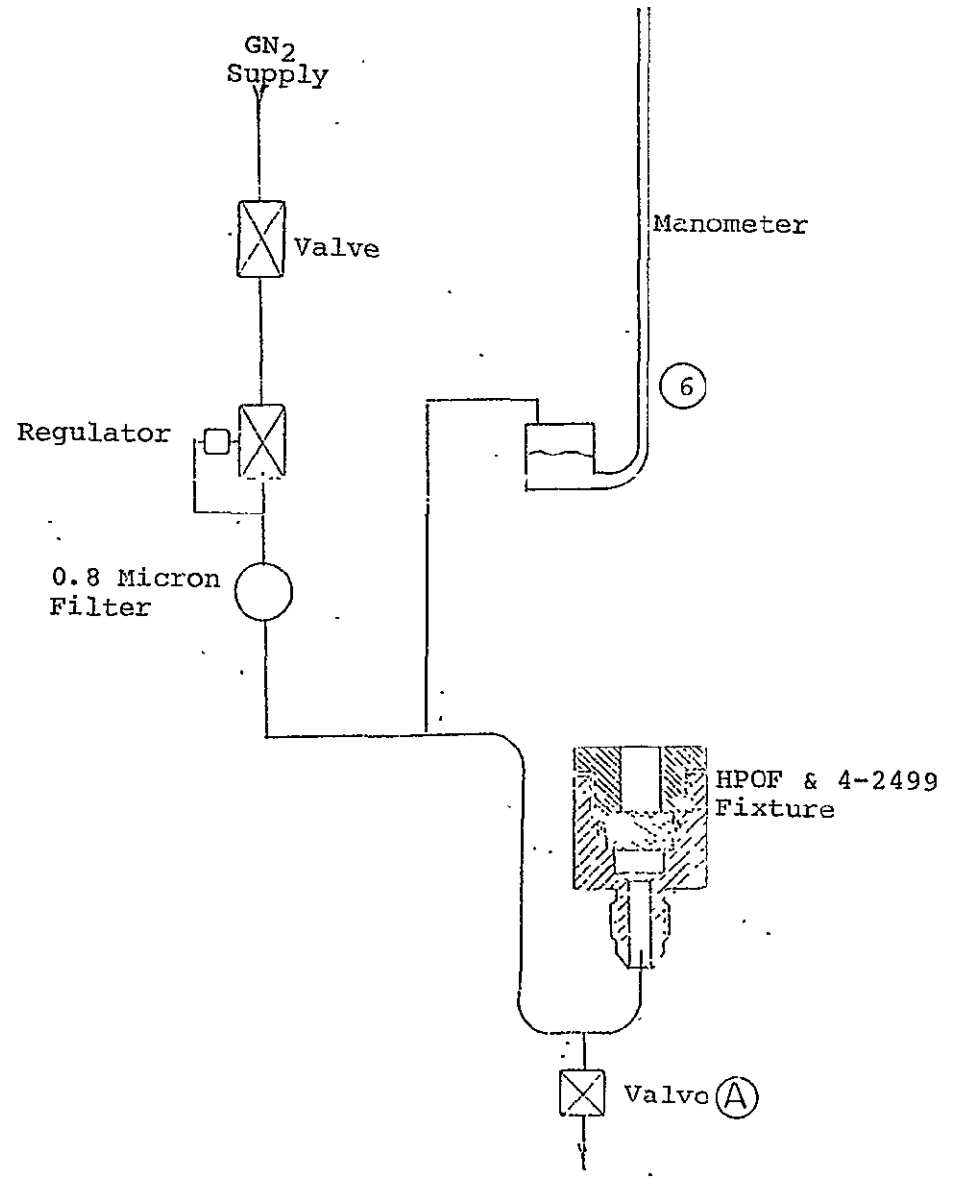

FIGURE 3

GAS FLOW TEST SYSTEM

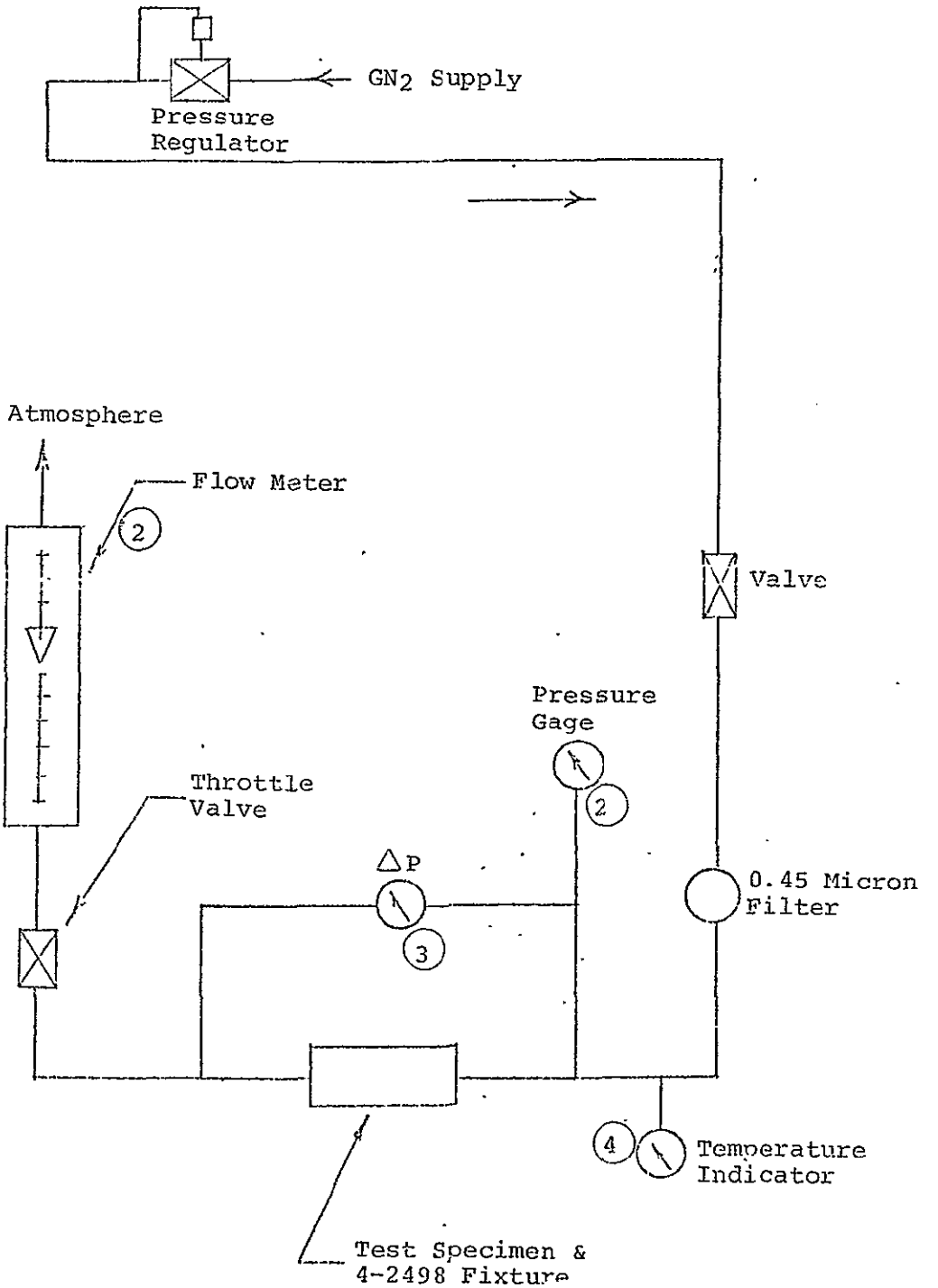

FIGURE 4

4A IDENTIFICATION LABEL

WINTEC DIV. - BRUNSWICK CORP.
5223 Imperial Highway
Los Angeles, Calif. 90045
Code. 21550

DO NOT OPEN
EXCEPT IN A CONTROLLED ENVIRONMENTAL FACILITY

P/N: 9-812 S/N: _____

PART NAME: HPOF QTY. 1 ea.

Cust. P/N: --

CONTRACT: NAS 9-14466

CUSTOMER: NASA

CLEANED PER: JSC-SN-C-0005

LEVEL: 25 SERVICE: Oxygen

INSP. DATE

4B INTEGRITY SEAL

WINTEC INSPECTION SEAL STAMP

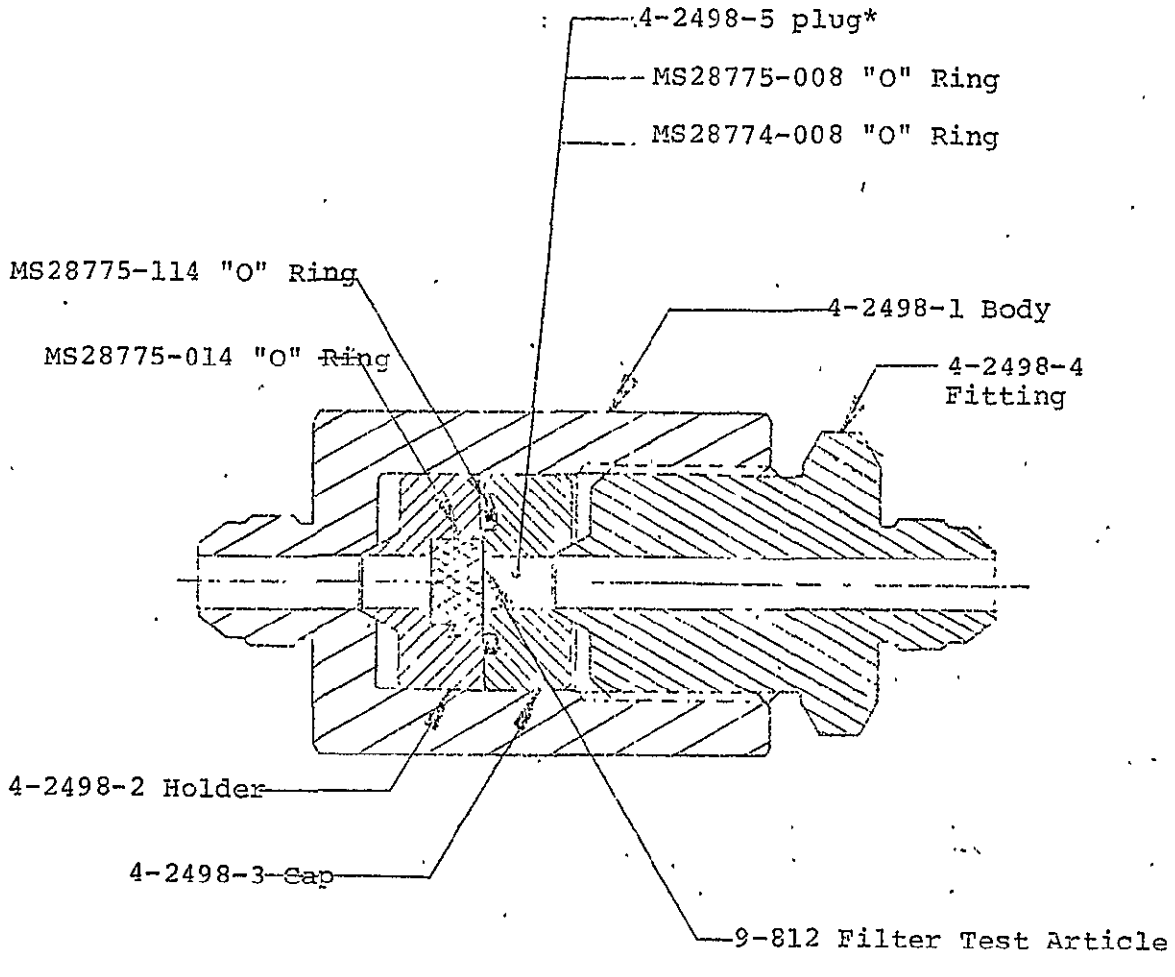

FIGURE 5
PROOF LOADING FIXTURE CROSS SECTION

*Place smaller diameter of plug toward HPOF (9-812).

TABLE 3

EQUIPMENT & INSTRUMENT LIST

Item No.		
①	Instrument	Pressure Gage
	Manufacturer	US Gauge
	Size	6" Dia.
	Serial No.	0018
	Range	0-20,000
	Accuracy	1%
	Calibration	90 Days
②	Instrument	Pressure Gauge
	Manufacturer	Ashcroft
	Size	5" Dia.
	Serial No.	0008
	Range	0-60 psig
	Accuracy	1%
	Calibration	90 Days
③	Instrument	$\triangle$P Transducer System
	Manufacturer	Validyne
	Model No.	CDIZ
	Serial No.	5101
	Range	0-100, 0-300, 0-1000 PSID
	Accuracy	1%
	Calibration	Prior to Use
④	Instrument	Temperature Indicator
	Manufacturer	Barber Coleman
	Model No.	Type 7
	Serial No.	46H 2317
	Range	$-300^{o}F$ to $+300^{o}F$
	Accuracy	$2^{o}F$
	Calibration	90 Days
⑤	Instrument	Flow Meter
	Manufacturer	Fischer Proter
	Model No.	1/2-27-G-10180
	Serial No.	FMK-004B
	Range	.2 to 3.4 SCFM GN_2
	Accuracy	1%
	Calibration	Yearly

TABLE 3

EQUIPMENT & INSTRUMENTATION LIST (CON'T)

Item No.

⑥

Instrument	Manometer
Manufacturer	Meriam
Model No.	30FB25
Serial No.	N 24121
Range	0 to 50 in. H_2O
Accuracy	.003 in. H_2O
Calibration	DNA*

*DNA = Does Not Apply

The noted instruments on instrumentation with the same accuracy shall be used for Acceptance Testing.

APPENDIX 1

TP 259

WINTEC division Brunswick Corporation

5223 West Imperial Highway
Los Angeles, California 90045
(213) 641-4300 Telex: 67-3105

S.O._____

CERTIFICATE OF CONFORMANCE

Date:_____ Part Number_____

Customer P.O. No._____ P.O. Item Number_____

Number parts delivered with this shipment_____

Shipper No._____ Serial No (s)_____

1. We hereby certify that the units were processed per the above noted purchase order and specifications. Parts manufactured by Wintec were fabricated from materials of which physical and/or chemical test reports are maintained on file subject to examination.

2. Materials furnished by the customer for the manufacture of parts have been in fact used in their manufacture.

3. All special processes applied to the above parts have been accomplished by approved sources.

4. Units have been cleaned and packaged to the following specifications:

_____

_____

_____

_____

_____

BY:_____
QUALITY ASSURANCE

F 40 120 8/71

TP 259

WINTEC division Brunswick Corporation

SHIPPER NO.

5223 WEST IMPERIAL HIGHWAY • LOS ANGELES, CALIFORNIA 90045 • PHONE: (213) 641-4300

SOLD TO	SHIP TO

DATE SHIPPED	SHIPPED VIA	INVOICE NUMBER	SALES ORDER NUMBER

CUSTOMER P.O. NUMBER	CONTRACT NUMBER	F.O.B.	TERMS:

ITEM	QUANTITY ORDERED	QUANTITY SHIPPED TO DATE	QUANTITY BACK ORDER	QUANTITY THIS SHIPMENT	PART NUMBER	DESCRIPTION	UNIT PRICE	EXTENSION

☐ COMPANY INSPECTION ☐ CUSTOMER INSPECTION ☐ GOVERNMENT INSPECTION

ATP TP 259 SHT. ____ OF ____

WINTEC CORPORATION

ACCEPTANCE TEST DATA SHEET
ATP TP 259
REVISION

S/O NO.

SHT. 1 OF 3

CUSTOMER	CUST. SPEC.	REV.	CUST. P/N	REV.	WINTEC P/N	REV.
NASA					9-812	

SERIAL NO.	Inspection of Product Para 4.1.1		.320" Length Para 4.1.1	.498 ± .001 Dia. Para 4.1.1	Inspect E. B. Weld Para 4.1.2	Weight gms Para 4.1.3	Proof Pressure Para 4.2		Bubble Point Observed Para 4.3	Rise of Fluid in Capillary Para 4.3	Fluid Temp. OF Para 4.3	Density of Fluid Para 4.3	Surface Tension of IPA Para 4.3	Standard Bubble Point Para 4.3	
ALLOWABLE VALUES			Reference Only		No Cracks or Voids	7.0 gms. Max.									

INSPECTION ACCEPTANCE

TEST										GOV'T.
WINTEC										
CUSTOMER										
DATE										

ATP TP 2 SHT ___ OF ___

WINTEC CORPORATION

ACCEPTANCE TEST DATA SHEET
ATP TP 259
REVISION

S/O NO.

SHT. 2 OF 3

CUSTOMER	CUST. SPEC.	REV.	CUST. P/N	REV.	WINTEC P/N	REV.
NASA					9-812	

SERIAL NO.	Gross-ΔP @ 1.28 scfm Para 4.4	Tare-ΔP @ 1.28 scfm Para 4.4	Net-ΔP @ 1.28 scfm Para 4.4	Gross-ΔP @ 1.71 scfm Para 4.4	Tare-ΔP @ 1.71 scfm Para 4.4	Net-ΔP @ 1.71 scfm Para 4.4	Gross-ΔP @ 2.14 scfm Para 4.4	Tare-ΔP @ 2.14 scfm Para 4.4	Net-ΔP @ 2.14 scfm Para 4.4	Gas Temp. °F @1.28 scfm Para 4.4	Gas Temp. °F @ 1.71 scfm Para 4.4	Gas Temp °F @2.14 scfm Para 4.4			
ALLOWABLE VALUES									300 PSID Max.						

INSPECTION ACCEPTANCE

TEST											GOV'T.
WINTEC											
CUSTOMER											
DATE											

ATP ____ SHT ____ OF ____

WINTEC CORPORATION

ACCEPTANCE TEST DATA SHEET
ATP TP 259
REVISION

S/O NO.

SHT. 3 OF 3

CUSTOMER	CUST. SPEC.	REV.	CUST. P/N	REV.	WINTEC P/N	TEST
NASA					9-812	

SERIAL NO.							Cleanliness Level Para 4.5 Particles, Micron/100 ml				NVR			
							0 / 4	5 / 15	16 / 25	> / 25				
ALLOWABLE VALUES							No Silting	19	4	0				

INSPECTION ACCEPTANCE

TEST										GOVT.
WINTEC										
CUSTOMER										
DATE										

APPENDIX B

RESULTS OF ACCEPTANCE TESTS PERFORMED BY WINTEC DIVISION, BRUNSWICK CORPORATION

ACCEPTANCE TEST DATA SHEET
ATSP 259
REVISION

S/O NO. 3400-6

SHT. 1 OF 3

WINTEC CORPORATION

CUSTOMER	CUST. SPEC.	REV.	CUST. P/N	REV.	WINTEC P/N	REV.
NASA					9-812	

SERIAL NO.	Inspection of Product Para 4.1.1		.320" LENGTH Para 4.1.1	.498 ± .001 Dia. Para 4.1.1	Inspect Weld Para 4.1.2	Weight gms Para 4.1.3	Proof Pressure Para 4.2		Bubble Point Observed Para 4.3	Rise of Fluid in Capillary Para 4.3	Fluid Temp. of Para 4.3	Density of Fluid Para 4.3	Surface Tension of IPA Para 4.3	Standard Bubble Point Para 4.3
027	OK		.341	.4975	OK	6.55	OK		55.233	1	72	.7827	21.50	53.904
028	OK		.343	.4978	OK	6.52	OK		59.483	1	72	.7827	21.50	58.129
029	OK		.3385	.4976	OK	6.54	OK		60.136	1	72	.7827	21.50	48.734
ALLOWABLE VALUES			.320" Min.		No Cracks or Voids	7.0 gms. Max.								

INSPECTION ACCEPTANCE

TEST	4.1.1	4.1.2	4.1.3	4.2	4.3					COMP.
WINTEC										
CUSTOMER										
DATE	8-26-76	8-26-76	8-26-76	8-26-76	8-26-76					

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ACCEPTANCE TEST DATA SHEET
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REVISION

S/O NO.

SHT. 2 OF 3

CUSTOMER	CUST. SPEC.	LTR.	CUST. P/N	REV.	WINTEC P/N	REV.
NASA					9-812	

SERIAL NO.	Gross-ΔP @ 1.38 scfm para 4.4	Tare-ΔP @ 1.38 scfm para 4.4	Net-ΔP @ 1.38 scfm para 4.4	Gross-ΔP @ 1.84 scfm para 4.4	Tare-ΔP @ 1.84 scfm para 4.4	Net-ΔP @ 1.84 scfm para 4.4	Gross-ΔP @ 2.35 scfm para 4.4	Tare-ΔP @ 2.35 scfm para 4.4	Net-ΔP @ 2.35 scfm para 4.4	Gas Temp. OF 1.38 scfm para 4.4	Gas Temp. OF 1.84 scfm para 4.4	Gas Temp OF 2.35 scfm para 4.4	INLET PRESSURE		
027	79	-	79	115	-	115	180	-	180	69	69	69	400		
028	97	-	97	140	-	140	215	-	215	69	69	69	400		
029	102	-	102	158	-	158	235	-	235	69	69	69	400		
ALLOWABLE VALUES															

INSPECTION ACCEPTANCE

TEST	4.4										GOVT.
WINTEC											
CUSTOMER											
DATE	8-30-76										

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CUSTOMER	CUST. SPEC.	REV.	CUST. P/N	REV.	WINTEC P/N	REV.
NASA					9-812	

Cleanliness Level Para 4.5

Particles, Micron/100 ml

SERIAL NO.	0/4	5/15	16/25	>/25	
027	8	6	1	0	0.3MG
028	8	5	0	0	0.3MG
029	8	4	1	0	0.3MG
ALLOWABLE VALUES	No Silting	19	4	0	

INSPECTION ACCEPTANCE

TEST										GOV'T.
WINTEC										
CUSTOMER										
DATE										

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CUSTOMER	CUST. SPEC.	REV.	CUST. P/N	REV.	WINTEC P/N	REV.
NASA					9-812	

SERIAL NO.	Inspection of Product Para 4.1.1	.282 ± .010 C.W.S. Para 4.1.1	.285 ± .002 Para 4.1.1	.468 ± .001 Dia. Para 4.1.1	Inspect B.-B. Welds Para 4.1.2	Weight gms Para 4.1.3	Proof Pressure Para 4.2	.232 ± .010" Para 4.2.5	Bubble Point Observed Para 4.3	Rise of Fluid in Capillary Para 4.3	Fluid Temp. or Para 4.3	Density of Fluid Para 4.3	Surface Tension of IPA Para 4.3	Standard Bubble Point Para 4.3	
022	OK	.2726	.3435	.4675	OK	6.8	OK	N/T	54.34	—	74	.7847	21.32	53.5%	
023	OK	.275	.320	.4825	OK	6.8	OK	N/T	55.233	—	74	.7847	21.33	58.32%	
025	OK	.2745	.322	.4875	OK	6.8	OK	N/T	56.258	—	74	.7847	21.32	11.561	
	(illegible)	(illegible)	(illegible)	(illegible)	(illegible)	(illegible)	(illegible)	(illegible)	(illegible)	(illegible)	(illegible)		(illegible)		5.27
ALLOWABLE VALUES					No Cracks or Voids	2.5 gms. Max.									

INSPECTION ACCEPTANCE

TEST	4.1.1	4.1.2	4.1.3	4.2	4.2.5	4.3				GOV'T.
WINTEC	(illegible)	(illegible)	(illegible)	(illegible)	(illegible)	(illegible)				(illegible)
QA/CR										
DATE	5-2-76	5-2-76	5-2-76	5-2-76	5-2-76	5-2-76				5-12-76

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CUSTOMER	CUST. SPEC.	REV.	CUST. P/N	REV.	WINTEC P/N	REV.
NASA					9-812	

SERIAL NO.	Gross-ΔP @ 1.38 SCFM Para 4.4	Tare-ΔP @ 1.38 SCFM Para 4.4	Net-ΔP @ 1.38 SCFM Para 4.4	Gross-ΔP @ 1.84 SCFM Para 4.4	Tare-ΔP @ 1.84 SCFM Para 4.4	Net-ΔP @ 1.84 SCFM Para 4.4	Gross-ΔP @ 2.35 SCFM Para 4.4	Tare-ΔP @ 2.35 SCFM Para 4.4	Net-ΔP @ 2.35 SCFM Para 4.4	Gas Temp. OF @ 1.38 SCFM Para 4.4	Gas Temp. OF @ 1.84 SCFM Para 4.4	Gas Temp OF @ 2.35 SCFM Para 4.4			
022	95	–	95	145	–	145	215	–	215	68	68	68			
023	115	–	115	170	–	170	250	–	250	68	68	68			
025	105	–	105	160	–	160	235	–	235	68	68	68			
	(illegible)	(illegible)	(illegible)	(illegible)	(illegible)	(illegible)	(illegible)	(illegible)	(illegible)	(illegible)	(illegible)	(illegible)	8-2-76		

ALLOWABLE VALUES

INSPECTION ACCEPTANCE

TEST	4.4										GOVT'L
QUALITY	(illegible)										(illegible)
OTHER											
DATE	5-7-76										8-02-76

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ATP ____ OF ____

CUSTOMER	CUST. SPEC.	REV.	CUST. P/N	REV.	WINTEC P/N	REV.
NASA					9-812	

SERIAL NO.						Cleanliness Level Para 4.5 Particles, Micron/100 ml				
						0 / 4	5 / 15	16 / 25	> / 25	
022			6.79			8	4	2	0	0.3MG
023			6.79			8	6	2	0	0.3MG
025			6.80			6	4	2	0	0.3MG
ALLOWABLE VALUES						No Silting	19	4	0	

INSPECTION ACCEPTANCE

TEST										FOR'L.
WINTEC	(W) 4	(W) 4	(W) 4							
CUSTOMER										
	QA 2-74	QE 2-74	QE 2-74							8-02-7-6

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CUSTOMER	CUST. SPEC.	REV.	CUST. P/N	REV.	WINTEC P/N	REV.
NASA					9-812	

SERIAL NO.	Inspection of Product Para 4.3.1	.282 +.000 -.010 O.D. Para 4.1.1	.225 ± .002 Para 4.1.1	.498 ± .001 Dia. Para 4.1.1	Inspect E. B. Voids Para 4.1.2	Weight gms Para 4.1.3	Proof Pressure Para 4.2	.282 +.000 -.010 Para 4.2.5	Bubble Point Observed Para 4.3	Rise of Fluid in Capillary Para 4.3	Fluid Temp. of Para 4.3	Density of Fluid Para 4.3	Surface Tension of IPA Para 4.3	Standard Bubble Point Para 4.3
823	OK	.278	.320	.495	OK	6.6	NA	NA	45.17	1	70	.7857	21.65	22.38
824	OK	.275	.318	.497	OK	6.5	NA	NA	45.17	1	70	.7857	21.65	22.38
825	OK	.275	.322	.4978	OK	6.4	NA	NA	21.58	1	70	.7832	21.62	22.65
ALLOWABLE VALUES					No Cracks or Voids									

INSPECTION ACCEPTANCE

TEST										GOVT.
T C										
CUSTOMER										
DATE	7-6-26	7-6-26	7-6-26	7-6-26	7-6-26					

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WINTEC CORPORATION

CUSTOMER	CUST. SPEC.	REV.	CUST. P/N	REV.	WINTEC P/N	REV.
NASA					9-812	

INLET PRESSURE = 520 PSIA

SERIAL NO.	Gross-ΔP @ 1.0 scfm Para 4.4	Gross-ΔP @ 1.0 scfm Para 4.4	Net-ΔP @ 1.0 scfm Para 4.4	Gross-ΔP @ 2.04 scfm Para 4.4	Tare-ΔP @ 2.04 scfm Para 4.4	Net-ΔP @ 2.04 scfm Para 4.4	Gross-ΔP @ 3.06 scfm Para 4.4	Tare-ΔP @ 3.06 scfm Para 4.4	Net-ΔP @ 3.06 scfm Para 4.4	Gas Temp. °F @ 1.0 scfm Para 4.4	Gas Temp. °F @ 2.04 scfm Para 4.4	Gas Temp °F @ 3.06 scfm Para 4.4			
325	75	—	75	155	—	125	350	—	350	70	70	70			
225	60	—	60	100	—	100	400	—	400	70	70	70			
125	75	—	75	155	—	125	390	—	390	70	70	70			
ALLOWABLE VALUES															

INSPECTION ACCEPTANCE

MFG	QA									GOV'T.
WINTEC										
C CR										
DATE										

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CUSTOMER	CUST. SPEC.	REV.	CUST. P/N	REV.	WINTEC P/N	REV.
NASA					9-812	

SERIAL NO.	Cleanliness Level Para 4.5 Particles, Micron/100 ml			
	0 / 4	5 / 15	16 / 25	> / 25
023	6	10	2	0
024	8	14	3	0
025	8	12	2	0
ALLOWABLE VALUES	No Silting	19	4	0

INSPECTION ACCEPTANCE

TEST						H.S. M.V.R. 0540				GOV'T.
WINTEC										
						33 B 76				

WINTEC CORPORATION

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SHT. 1 OF 3

CUSTOMER	CUST. SPEC.	REV.	CUST. P/N	REV.	WINTEC P/N	REV.
NASA	—	—	—	—	9-812	

SERIAL NO.	Inspection of Product Para 4.1.1	.282 +.010 -.000 C.H.S. Para 4.1.1	.285 ± .002 Para 4.1.1	.498 ± .001 Dia. Para 4.1.1	Inspect Welds Para 4.1.2	Weight gms Para 4.1.3	Proof Pressure Para 4.2	.282 ± .010" Para 4.2.5	Bubble Point Observed Para 4.3	Rise of Fluid in Capillary Para 4.3	Fluid Temp. of Para 4.3	Density of Fluid Para 4.3	Surface Tension of IPA Para 4.3	Standard Bubble Point Para 4.3
021		.2718	.3487	.4973		6.7674	2600	.2699	64581	—	74	.7817	21.33	63.648
ALLOWABLE VALUES					No Cracks or Voids	2.5 gms. Max.								

INSPECTION ACCEPTANCE

TEST	4.1.1	4.1.2	4.1.3	4.2	4.2.5	4.3				GOV'T.
WINTEC										
CL B										
DATE										

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SHT. 2 OF 3

WINTEC CORPORATION

CUSTOMER	CUST. SPEC.	REV.	CUST. P/N	REV.	WINTEC P/N	REV.
ASA	—	—	—	—	9-812	

SERIAL NO.	Gross-ΔP @ 1.0 scfm Para 4.4	Tare-ΔP @ 1.0 scfm Para 4.4	Net-ΔP @ 1.0 scfm Para 4.4	Gross-ΔP @ 2.04 scfm Para 4.4	Tare-ΔP @ 2.04 scfm Para 4.4	Net-ΔP @ 2.04 scfm Para 4.4	Gross-ΔP @ 3.06 scfm Para 4.4	Tare-ΔP @ 3.06 scfm Para 4.4	Net-ΔP @ 3.06 scfm Para 4.4	Gas Temp. °F @ 1.0 scfm Para 4.4	Gas Temp. °F @ 2.04 scfm Para 4.4	Gas Temp °F @ 3.06 scfm Para 4.4		
021	57	—	67	145	—	146	308	—	308	68	68	68	@ 420 PSI.	INLET
ALLOWABLE VALUES														

INSPECTION ACCEPTANCE

TEST	4.4									GOV'T.
WINTEC										
CUS										
DATE										

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SHT. 3 OF 3

CUSTOMER	CUST. SPEC.	REV.	CUST. P/N	REV.	WINTEC P/N	REV.
NASA	—	—	—	—	9-812	

SERIAL NO.	Cleanliness Level Para 4.5			
	Particles, Micron/100 ml			
	5/4	15/5	25/16	>25
011	—	3	2	0
ALLOWABLE VALUES	No Siting	19	4	0

INSPECTION ACCEPTANCE

TEST	4.5									GOV'T.
WINTEC										
CU.										
DATE										

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CUSTOMER	CUST. SPEC.	REV.	CUST. P/N	REV.	WINTEC P/N	REV.
NASA					9-812	

SERIAL NO.	Inspection of Product Para 4.1.1	.232 ± .008 C.M.S. Para 4.1.1	.285 ± .002 Para 4.1.1	.498 ± .001 Dia. Para 4.1.1	Inspect E. B Welds Para 4.1.2	Weight gms Para 4.1.3	Proof Pressure Para 4.2	.282 ± .010" Para 4.2.5	Bubble Point Observed Para 4.3	Rise of Fluid in Capillary Para 4.3	Fluid Temp. °F Para 4.3	Density of Fluid Para 4.3	Surface Tension of IPA Para 4.3	Standard Bubble Point Para 4.3	
018		2703	—	—		—	—	2703	—	—	—	—	—		
020		2664	.2851	.4977		5.61		2664	56.93	—	75	.7812	22.7	52.68	
ALLOWABLE VALUES					No Cracks or Voids	2.5 gms. Max.									

INSPECTION ACCEPTANCE

TEST	4.1.1	4.1.2	4.1.3	4.2	4.2.5	4.3	4.4	4.5		GOV'T.
WINTEC										
C ER										
D										

WINTEC CORPORATION

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SHT. 2 OF 3

CUSTOMER	CUST. SPEC.	REV.	CUST. P/N	REV.	WINTEC P/N	REV.
NASA					9-812	

SERIAL NO.	Gross-ΔP @ 1.0 scfm Para 4.4	Tare-ΔP @ 1.0 scfm Para 4.4	Net-ΔP @ 1.0 scfm Para 4.4	Gross-ΔP @ 2.04 scfm Para 4.4	Tare-ΔP @ 2.04 scfm Para 4.4	Net-ΔP @ 2.04 scfm Para 4.4	Gross-ΔP @ 3.06 scfm Para 4.4	Tare-ΔP @ 3.06 scfm Para 4.4	Net-ΔP @ 3.06 scfm Para 4.4	Gas Temp. °F @ 1.0 scfm Para 4.4	Gas Temp. °F @ 2.04 scfm Para 4.4	Gas Temp °F @ 3.06 scfm Para 4.4	Inlet Press-sure ± PSIG		
018															
020	40	NEG	40	92	NEG	92	173	NEG	173	76	76	76	40±		
ALLOWABLE VALUES															

INSPECTION ACCEPTANCE

TEST										GOV'T.
WINTEC										
CL A										
DATE	6/18/78	6/19/78								

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CUSTOMER	CUST. SPEC.	REV.	CUST. P/N	REV.	WINTEC P/N	REV.
NASA					9-812	

SERIAL NO.	Cleanliness Level Para 4.5 Particles, Micron/100 ml				NVR Para 4.5
	0 / 4	5 / 15	16 / 25	> / 25	
020	~~8~~	8	4	0	0.4MG
ALLOWABLE VALUES	No Silting	19	4	0	.001 GR/100ML

INSPECTION ACCEPTANCE

TEST	4.5										GOVT.
WINTEC											
CUSTOMER											
DATE	JAN 18										

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CUSTOMER	CUST. SPEC.	REV.	CUST. P/N	REV.	WINTEC P/N	REV.
NASA					9-812	

SERIAL NO.	Gross-ΔP @ 1.0 scfm Para 4.4	Tare-ΔP @ 1.0 scfm Para 4.4 (2.4)	Net-ΔP @ 1.0 scfm Para 4.4	Gross-ΔP @ 2.04 scfm Para 4.4	Tare-ΔP @ 2.04 scfm Para 4.4 (4.7)	Net-ΔP @ 2.04 scfm Para 4.4	Gross-ΔP @ 3.06 scfm Para 4.4	Tare-ΔP @ 3.06 scfm Para 4.4 (7.1)	Net-ΔP @ 3.06 scfm Para 4.4	Gas Temp. °F @ 1.0 scfm Para 4.4	Gas Temp °F @ 2.04 scfm Para 4.4	Gas Temp °F @ 3.06 scfm Para 4.4	Inlet Pressure PSIG	
2	34	—	—	79	—	—	140	—	—	63	62	60°F	45	
2	32			78			138			63	62	60	45	
2	47			117			230			62	61	60	50	
3	44			115			210			63	63	63	40	
3	62			162			—			61	60	—	30	
6	37			88			158			63	64	65	45	
6	53			132			—			62	62	—	30	
ALLOWABLE VALUES														

INSPECTION ACCEPTANCE

TEST										GOV'T.
WIP										
CUSTOMER										
DATE										

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WINTEC CORPORATION

CUSTOMER	CUST. SPEC.	REV.	CUST. P/N	REV.	WINTEC P/N	REV.
NASA					9-812	

SERIAL NO.	Inspection of Product Para 4.1.1	.282 ± .010 C.H.S. Para 4.1.1	.285 ± .002 Para 4.1.1	.498 ± .001 Dia. Para 4.1.1	Inspect E. B Welds Para 4.1.2	Weight gms Para 4.1.3	Proof Pressure Para 4.2	.282 ± .010" Para 4.2.5	Bubble Point Observed Para 4.3	Rise of Fluid in Capillary Para 4.3	Fluid Temp. of Para 4.3	Density of Fluid Para 4.3	Surface Tension of IPA Para 4.3	Standard Bubble Point Para 4.3	
001		.2717	.2852	.4976			NG.	—							
002		.2697	.286	.4977			OK	.2696	4.813	1.5	69°	.7845	19.41	70.876	
005		.2702	.285	.4976			OK	.2702	4.937	1.5	69°	.7845	19.41	72.713	
004		.274	.286	.4979											
005		.2705	.285	.4978											
006		.2728	.285	.4978			OK	.2777	5.250	1.5	69°	.7845	19.41	77.350	
007		.2709	.284	.4976											
008		.2711	.2847	.4978											
		.2746													
ALLOWABLE VALUES					No Cracks or Voids	2.5 gms. Max.									

INSPECTION ACCEPTANCE

TEST											GOV'T.
WINTEC											
CUSTOMER											
DATE											

#2 Burst at 12000 = 4.91 in.

APPENDIX C

ORIGINAL

FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA

TABLE 1

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 1 PART IC TEST DESCRIPTION 415 psia (nominal) Test Specimen Inlet Pressure Tare Test

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
0	45.7	69.0	.16	52.3	70.7	408.3	69.8	.0206
0	50.1	68.7	.20	57.4	70.8	418.7	69.7	.0278
0	50.7	68.4	.24	57.4	70.8	415.5	69.6	.0333
0	52.6	66.7	.29	58.7	69.6	412.9	68.2	.0418
0	52.0	65.2	.40	57.4	68.7	413.5	66.9	.0551
0	52.6	64.1	.49	58.1	67.8	418.7	65.9	.0683
0	52.0	63.6	.59	57.4	67.1	417.4	65.4	.0817
0	52.0	63.3	.69	57.4	66.8	416.8	65.1	.0954
0	52.0	63.3	.80	56.2	66.2	412.9	64.7	.1082
0	51.3	63.0	.90	54.9	65.7	413.5	64.3	.1198
0	51.3	62.7	.90	54.9	65.3	415.5	64.0	.1193
0	50.1	62.8	.81	54.9	65.4	415.5	64.1	.1072
0	52.0	63.1	.71	57.4	65.7	417.4	64.4	.0973
0	52.0	63.6	.61	57.4	66.2	415.5	64.9	.0848
0	48.2	64.3	.50	54.2	66.8	412.2	65.6	.0664
0	50.1	64.7	.41	56.8	67.2	415.5	66.0	.0566
0	50.7	65.3	.31	57.4	67.7	416.8	66.5	.0430
0	48.8	66.2	.25	54.9	68.5	412.9	67.3	.0333
0	52.0	66.7	.21	58.1	68.8	418.1	67.7	.0286
0	52.0	67.4	.13	58.1	69.5	414.2	68.5	.0189

TABLE 1

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 1 PART II TEST DESCRIPTION 415 psia (nominal) Test Specimen Inlet Pressure Tare Test

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
408.3	69.8	.0206		0		0	0
418.7	69.7	.0278		0		0	0
415.5	69.6	.0333		0		0	0
412.9	68.2	.0418		.001		0	0.001
413.5	66.9	.0551		.001		0	0.001
418.7	65.9	.0683		.001		0	0.001
417.4	65.4	.0817		.001		0	0.001
416.8	65.1	.0954		.001		0	0.001
412.9	64.7	.1082		.002		0	0.002
413.5	64.3	.1198		.002		0	0.002
415.5	64.0	.1193		.002		0	0.002
415.5	64.1	.1072		.002		0	0.002
417.4	64.4	.0973		.001		0	0.001
415.5	64.9	.0848		.001		0	0.001
412.2	65.6	.0664		0		0	0
415.5	66.0	.0566		0		0	0
416.8	66.5	.0430		0		0	0
412.9	67.3	.0333		0		0	0
418.1	67.7	.0286		0		0	0
414.2	68.5	.0189		0		0	0

COMPUTED EQUATION:

TARE DIFF. PRESS = -0.000034 - 0.000444 (ACFM) + 0.150933 (ACFM)**2 + 0 (ACFM)**3

SIGMA = 0.00034

TABLE 1

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 1 PART 10 TEST DESCRIPTION 415 psia (nominal) Test Specimen Inlet Pressure Tare Test

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
28.708	408.3	294.2	21.0	69.8	16.2	.0206	.573	1.128	2.488	0.0000	0.000
29.438	418.7	294.1	21.0	69.7	22.4	.0278	.792	1.560	3.440	0.0000	0.000
29.210	415.5	294.0	20.9	69.6	26.6	.0333	.940	1.852	4.083	0.0000	0.000
29.028	412.9	293.3	20.1	68.2	33.3	.0418	1.177	2.317	5.108	0.0001	0.001
29.073	413.5	292.6	19.4	66.9	44.1	.0551	1.558	3.069	6.765	0.0001	0.001
29.438	418.7	292.0	18.8	65.9	55.5	.0683	1.961	3.861	8.512	0.0001	0.001
29.347	417.4	291.7	18.5	65.4	66.3	.0817	2.340	4.607	10.157	0.0001	0.001
29.302	416.8	291.5	18.4	65.1	77.3	.0954	2.731	5.378	11.857	0.0001	0.001
29.028	412.9	291.3	18.2	64.7	86.9	.1082	3.069	6.043	13.323	0.0001	0.002
29.073	413.5	291.1	18.0	64.3	96.5	.1198	3.408	6.710	14.793	0.0001	0.002
29.210	415.5	290.9	17.8	64.0	96.6	.1193	3.410	6.714	14.802	0.0001	0.002
29.210	415.5	291.0	17.8	64.1	86.7	.1072	3.063	6.032	13.298	0.0001	0.002
29.347	417.4	291.2	18.0	64.4	79.1	.0973	2.792	5.497	12.119	0.0001	0.001
29.210	415.5	291.4	18.3	64.9	68.5	.0848	2.420	4.765	10.504	0.0001	0.001
28.982	412.2	291.8	18.6	65.6	53.2	.0664	1.877	3.697	8.150	0.0000	0.000
29.210	415.5	292.0	18.9	66.0	45.6	.0566	1.611	3.173	6.994	0.0000	0.000
29.302	416.8	292.3	19.2	66.5	34.8	.0430	1.229	2.419	5.333	0.0000	0.000
29.028	412.9	292.8	19.6	67.3	26.7	.0333	.941	1.852	4.083	0.0000	0.000
29.393	418.1	293.0	19.9	67.7	23.2	.0286	.818	1.611	3.551	0.0000	0.000
29.119	414.2	293.4	20.3	68.5	15.1	.0189	.534	1.051	2.318	0.0000	0.000
AVG. 29.183	AVG. 415.1	AVG. 292.3	AVG. 19.1	AVG. 66.4							
DEV. .134	DEV. 2.0	DEV. 0.8	DEV. 0.8	DEV. 1.4							

DATE: 4/20/76

TABLE 2

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 1 PART II TEST DESCRIPTION 700 psia (nominal) Test Specimen Inlet Pressure Tare Test

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
0	50.3	74.0	.13	57.5	76.2	697.4	75.1	.0108
0	52.2	72.7	.21	58.8	75.9	697.4	74.3	.0180
0	50.3	71.7	.25	57.5	75.8	697.4	73.8	.0208
0	51.0	70.5	.31	57.5	75.4	689.4	73.0	.0255
0	49.1	69.5	.40	54.9	74.8	689.4	72.1	.0315
0	49.7	68.3	.50	54.9	74.1	685.4	71.2	.0402
0	47.2	66.8	.60	53.0	73.0	693.4	69.9	.0488
0	51.0	65.2	.72	55.6	70.9	697.4	68.1	.0576
0	52.2	64.1	.81	56.2	69.0	709.4	66.5	.0643
0	49.7	63.8	.90	53.7	68.4	693.4	66.1	.0697
0	49.7	63.6	.90	53.7	67.9	693.4	65.7	.0697
0	49.7	63.7	.80	54.3	67.9	709.4	65.8	.0614
0	49.7	64.1	.69	54.9	68.1	697.4	66.1	.0545
0	49.7	64.6	.60	54.9	68.6	697.4	66.6	.0472
0	51.3	65.1	.49	56.2	69.1	701.4	67.1	.0397
0	49.7	65.8	.40	55.6	69.7	705.4	67.8	.0311
0	50.3	66.5	.30	56.9	70.3	701.4	68.4	.0248
0	51.0	67.2	.25	57.5	70.9	709.4	69.1	.0204
0	51.0	68.0	.20	57.5	71.6	697.4	69.8	.0167
0	50.3	69.1	.12	57.5	72.4	701.4	70.8	.0102

TABLE 2

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 1 PART II TEST DESCRIPTION 700 psia (nominal) Test Specimen Inlet Pressure Tare Test

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
697.4	75.1	.0108		0		0	0
697.4	74.3	.0180		0		0	0
697.4	73.8	.0208		0		0	0
689.4	73.0	.0255		0		0	0
689.4	72.1	.0315		0		0	0
685.4	71.2	.0402		0		0	0
693.4	69.9	.0458		0		0	0
697.4	68.1	.0576		.001		0	-0.001
709.4	66.5	.0643		.001		0	0.001
693.4	66.1	.0697		.001		0	0.001
693.4	65.7	.0697		.001		0	0.001
709.4	65.8	.0614		.001		0	0.001
697.4	66.1	.0545		0		0	0
697.4	66.6	.0472		0		0	0
701.4	67.1	.0397		0		0	0
705.4	67.8	.0311		0		0	0
701.4	68.4	.0245		0		0	0
709.4	69.1	.0204		0		0	0
697.4	69.8	.0167		0		0	0
701.4	70.8	.0102		0		0	0

COMPUTED EQUATION:

TARE DIFF. PRESS = 0.000360 - 0.033161 (ACFM) + 0.633359 (ACFM)**2 + 0 (ACFM)**3

SIGMA = 0.000184

TABLE 2

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 1 PART 10 TEST DESCRIPTION 700 psia (nominal) Test Specimen Inlet Pressure Tare Test

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GNS KG/HR	GNS LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
49.033	697.4	297.1	23.9	75.1	14.4	.0108	.509	1.002	2.210	0	0
49.033	697.4	296.7	23.5	74.3	24.0	.0180	.846	1.667	3.674	0	0
49.033	697.4	296.4	23.2	73.8	27.8	.0208	.982	1.934	4.263	0	0
48.469	689.4	295.9	22.8	73.0	33.7	.0255	1.190	2.343	5.166	0	0
48.469	689.4	295.5	22.3	72.1	41.6	.0315	1.471	2.897	6.387	0	0
48.188	685.4	294.9	21.8	71.2	53.0	.0402	1.871	3.685	8.123	0	0
48.751	693.4	294.2	21.1	69.9	61.2	.0458	2.162	4.258	9.387	0	0
49.033	697.4	293.2	20.0	68.1	77.6	.0576	2.741	5.397	11.899	0.0001	0.001
49.877	709.4	292.3	19.2	66.5	88.4	.0643	3.122	6.148	13.554	0.0001	0.001
48.751	693.4	292.1	18.9	66.1	93.8	.0697	3.312	6.521	14.377	0.0001	0.001
48.751	693.4	291.9	18.7	65.7	93.8	.0697	3.314	6.526	14.388	0.0001	0.001
49.877	709.4	291.9	18.8	65.8	84.5	.0614	2.985	5.878	12.959	0.0001	0.001
49.033	697.4	292.1	18.9	66.1	73.7	.0545	2.604	5.127	11.302	0	0
49.033	697.4	292.4	19.2	66.6	63.9	.0472	2.256	4.442	9.792	0	0
49.314	701.4	292.7	19.5	67.1	53.9	.0397	1.903	3.747	8.261	0	0
49.596	705.4	293.0	19.9	67.8	42.5	.0311	1.501	2.955	6.515	0	0
49.314	701.4	293.4	20.2	68.4	33.2	.0245	1.174	2.311	5.095	0	0
49.877	709.4	293.7	20.6	69.1	27.9	.0204	.984	1.938	4.272	0	0
49.033	697.4	294.2	21.0	69.8	22.5	.0167	.794	1.564	3.448	0	0
49.314	701.4	294.7	21.5	70.8	13.8	.0102	.486	.956	2.108	0	0
AVG. 49.089	AVG. 698.2	AVG. 293.9	AVG. 20.7	AVG. 69.4							
DEV. .355	DEV. 5.0	DEV. 1.4	DEV. 1.4	DEV. 2.6							

DATE: 4/20/76

TABLE 3

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 1 PART IF TEST DESCRIPTION 1000 psia (nominal) Test Specimen Inlet Pressure Tare Test

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
0	51.2	67.9	.12	57.4	69.6	984.8	68.8	.0072
0	57.2	66.1	.21	57.4	69.9	980.7	68.0	.0121
0	57.2	64.5	.26	57.4	70.2	988.8	67.3	.0151
0	58.5	63.5	.31	57.4	70.4	992.8	66.7	.0179
0	57.2	61.3	.39	57.4	70.3	1020.8	65.8	.0220
0	58.5	60.0	.49	56.2	70.2	980.7	65.1	.0281
0	48.9	59.0	.59	54.9	70.2	988.8	64.6	.0329
0	58.5	58.1	.70	55.5	70.2	972.7	64.1	.0400
0	48.6	57.6	.81	62.9	70.0	984.8	63.8	.0433
0	51.2	56.3	.93	54.9	69.9	1000.8	63.1	.0510
0	52.5	55.8	.93	54.5	69.9	992.8	62.9	.0506
0	47.4	56.1	.80	51.0	69.9	996.8	63.1	.0410
0	48.9	56.5	.71	54.9	69.9	1000.8	63.2	.0388
0	49.9	57.1	.59	54.9	70.0	976.7	63.7	.0334
0	51.2	58.0	.49	57.4	70.0	992.8	64.0	.0286
0	52.5	59.0	.40	57.4	70.0	988.8	64.5	.0230
0	51.2	60.2	.31	57.4	70.1	984.8	65.2	.0178
0	48.6	61.7	.25	54.9	70.2	968.7	66.0	.0142
0	50.5	62.7	.20	57.4	70.3	1016.8	66.5	.0111
0	49.9	64.7	.12	56.2	70.4	988.8	67.6	.0071

TABLE 3

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 1 PART II TEST DESCRIPTION 1000 psia (nominal) Test Specimen Inlet Pressure Tare Test

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
984.6	68.8	.0072		-0.000		0	0.000
987.7	68.0	.0121		-0.000		0	0.000
988.8	67.7	.0151		-0.000		0	0.000
992.8	66.7	.0179		-0.000		0	0.000
1002.0	65.8	.0220		.001		0	.001
980.7	66.1	.0281		.001		0	.001
988.8	64.6	.0329		.001		0	.001
972.7	64.1	.0400		.001		0	.001
984.8	63.8	.0433		.001		0	.001
1000.8	63.1	.0510		.001		0	.001
992.8	62.9	.0506		.001		0	.001
996.8	63.1	.0410		.001		0	.001
1000.8	63.2	.0388		.001		0	.001
972.7	63.7	.0334		-0.000		0	0.000
992.8	64.1	.0286		-0.000		0	0.000
988.8	64.5	.0230		-0.000		0	0.000
984.6	65.2	.0178		-0.000		0	0.000
968.7	66.0	.0142		-0.000		0	0.000
1016.8	66.5	.0111		-0.000		0	0.000
988.6	67.6	.0071		-0.000		0	0.000

COMPUTED EQUATION:

TARE DIFF. PRESS = -0.000164 + 0.012693 * (ACFM) + 0.248070 * (ACFM)**2 + 0 (ACFM)**3

SIGMA = 0.00033

TABLE 3

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 1 PART IF TEST DESCRIPTION 1000 psia (nominal) Test Specimen Inlet Pressure Tare Test

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
69.235	984.8	293.6	20.4	68.8	13.8	.0072	.487	.958	2.113	0.0000	0.000
68.954	980.7	293.2	20.0	68.0	22.9	.0121	.810	1.594	3.514	0.0000	0.000
69.517	988.8	292.8	19.6	67.3	28.9	.0151	1.020	2.008	4.426	0.0000	0.000
69.799	992.8	292.5	19.3	66.7	34.4	.0179	1.216	2.394	5.279	0.0000	0.000
71.771	1020.8	291.9	18.8	65.8	43.5	.0220	1.537	3.025	6.670	0.0001	.001
68.954	980.7	291.6	18.4	65.1	53.6	.0281	1.894	3.729	8.222	0.0001	.001
69.517	988.8	291.3	18.1	64.6	63.3	.0329	2.234	4.399	9.698	0.0001	.001
68.390	972.7	291.1	17.9	64.1	75.8	.0400	2.675	5.267	11.613	0.0001	.001
69.235	984.8	290.8	17.7	63.8	83.1	.0433	2.935	5.778	12.739	0.0001	.001
70.362	1000.8	290.4	17.3	63.1	99.5	.0510	3.515	6.921	15.258	0.0001	.001
69.799	992.8	290.3	17.1	62.9	98.0	.0506	3.462	6.816	15.027	0.0001	.001
70.080	996.8	290.4	17.3	63.1	79.8	.0410	2.818	5.549	12.234	0.0001	.001
70.362	1000.8	290.5	17.4	63.2	75.8	.0388	2.676	5.269	11.616	0.0001	.001
68.390	972.7	290.8	17.6	63.7	63.4	.0334	2.238	4.407	9.716	0.0000	0.000
69.799	992.8	290.9	17.8	64.0	55.4	.0286	1.956	3.851	8.489	0.0000	0.000
69.517	988.8	291.2	18.1	64.5	44.2	.0230	1.561	3.073	6.775	0.0000	0.000
69.235	984.8	291.6	18.4	65.2	34.2	.0178	1.206	2.375	5.236	0.0000	0.000
68.108	968.7	292.0	18.9	66.0	26.7	.0142	.944	1.859	4.099	0.0000	0.000
71.489	1016.8	292.3	19.2	66.5	21.8	.0111	.771	1.518	3.348	0.0000	0.000
69.517	988.8	292.9	19.8	67.6	13.5	.0071	.477	.939	2.070	0.0000	0.000
Avg. 69.601	Avg. 990.0	Avg. 291.6	Avg. 18.5	Avg. 65.2							
Dev. 0.665	Dev. 9.4	Dev. 0.8	Dev. 0.8	Dev. 1.5							

TABLE 4

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 4/23/76

TEST NUMBER F PART IF TEST DESCRIPTION 2900 psia (nominal) Test Specimen Inlet Pressure Tare Test

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
0	54.2	78.7	.14	54.0	83.0	2868.0	80.9	.0026
0	45.7	77.3	.21	45.2	82.8	2791.2	80.0	.0034
0	48.5	74.7	.26	45.0	81.9	2859.9	78.3	.0041
0	44.6	71.0	.30	43.9	80.8	2859.9	75.9	.0047
0	44.6	67.5	.40	43.7	79.2	2855.9	73.2	.0061
0	44.2	61.8	.50	43.3	76.4	2851.8	69.1	.0076
0	43.4	57.9	.60	42.2	73.8	2847.8	65.8	.0089
0	48.0	52.0	.70	38.6	68.7	2698.3	60.3	.0100
0	48.0	63.2	.73	47.5	73.7	2868.1	68.5	.0022
0	45.5	62.8	.20	45.2	73.4	2868.0	68.1	.0032
0	45.3	61.9	.26	44.7	72.9	2863.9	67.4	.0040
0	46.6	61.9	.31	46.0	72.3	2863.9	66.6	.0049
0	43.8	59.1	.37	43.1	71.4	2859.9	65.2	.0055
0	45.7	56.9	.45	44.8	70.0	2859.9	63.4	.0071
0	43.4	53.5	.55	42.0	67.6	2855.9	60.6	.0081
0	44.9	50.3	.60	43.5	64.8	2855.9	57.5	.0091
0	44.4	47.9	.65	42.9	62.1	2851.8	55.0	.0099
0	43.4	46.7	.70	42.0	60.4	2847.8	53.6	.0103
0	42.1	45.7	.80	40.5	58.9	2843.7	52.3	.0114
0	41.9	44.5	.91	39.5	57.1	2863.9	50.8	.0125

TABLE 4

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 4/23/76

TEST NUMBER F PART TF TEST DESCRIPTION 2900 psia (nominal) Test Specimen Inlet Pressure Tare Test

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
2868.0	80.9	.0026	-0.001	-0.000	-0.001	0	-0.001
2791.2	80.0	.0034	-0.001	-0.000	-0.001	0	-0.001
2859.9	78.3	.0041	.000	.001	.001	0	.001
2859.9	75.9	.0047	.000	.001	.001	0	.001
2855.9	73.2	.0061	.000	.001	.001	0	.001
2851.8	69.1	.0076	.000	.001	.001	0	.001
2847.8	65.8	.0089	.000	-0.000	.000	0	.000
2698.3	60.3	.0100	.000	.001	.001	0	.001
2868.0	68.5	.0022	.000	-0.000	.000	0	.000
2868.0	68.1	.0032	.000	-0.000	.000	0	.000
2863.9	67.4	.0040	.000	-0.000	.000	0	.000
2863.9	66.6	.0049	.000	-0.000	.000	0	.000
2859.9	65.2	.0056	.000	-0.000	.000	0	.000
2859.9	63.4	.0071	.000	-0.000	.000	0	.000
2855.9	60.6	.0081	-0.001	-0.000	-0.001	0	-0.001
2855.9	57.5	.0091	-0.001	-0.001	-0.001	0	-0.001
2851.8	55.0	.0099	-0.001	-0.001	-0.001	0	-0.001
2847.8	53.6	.0103	-0.001	-0.001	-0.001	0	-0.001
2843.7	52.3	.0114	-0.001	-0.001	-0.001	0	-0.001
2863.9	50.8	.0125	-0.001	-0.001	-0.001	0	-0.001

COMPUTED EQUATION:

TARE DIFF. PRESS = -0.001246 0 + 0.488453 0 (ACFM) + -40.072254 0 (ACFM)**2 + 0 (ACFM)**3

SIGMA = 0.000700

TABLE 4

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 4/23/76

TEST NUMBER F PART IE TEST DESCRIPTION 2900 psia (nominal) Test Specimen Inlet Pressure Tare Test

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
201.639	2866.0	300.3	27.1	80.9	13.9	.0026	.491	.967	2.133	-0.0000	-0.001
196.242	2791.2	299.9	26.7	80.0	17.9	.0034	.633	1.246	2.747	-0.0000	-0.001
201.071	2859.9	298.9	25.7	78.3	22.0	.0041	.777	1.530	3.372	.0000	.001
201.071	2859.9	297.6	24.4	75.9	25.4	.0047	.897	1.766	3.893	.0000	.001
200.787	2855.9	296.1	22.9	73.2	33.5	.0061	1.182	2.327	5.130	.0000	.001
200.503	2851.8	293.8	20.6	69.1	42.0	.0076	1.485	2.923	6.445	.0000	.001
200.219	2847.8	292.0	18.8	65.8	49.2	.0089	1.737	3.421	7.541	.0000	.000
189.706	2698.3	288.9	15.7	60.3	52.7	.0100	1.861	3.663	8.077	.0000	.001
201.639	2868.0	293.4	20.3	68.5	12.2	.0022	.431	.849	1.871	.0000	.000
201.639	2868.0	293.2	20.0	68.1	17.7	.0032	.626	1.232	2.717	.0000	.000
201.355	2863.9	292.8	19.7	67.4	22.3	.0040	.786	1.548	3.413	.0000	.000
201.355	2863.9	292.4	19.2	66.6	27.2	.0049	.962	1.894	4.175	.0000	.000
201.071	2859.9	291.6	18.5	65.2	31.1	.0056	1.097	2.161	4.763	.0000	.000
201.071	2859.9	290.6	17.5	63.4	39.4	.0071	1.391	2.739	6.038	.0000	.000
200.787	2855.9	289.0	15.9	60.6	45.2	.0081	1.596	3.144	6.930	-0.0000	-0.001
200.787	2855.9	287.4	14.2	57.5	51.4	.0091	1.815	3.574	7.880	-0.0001	-0.001
200.503	2851.8	285.9	12.8	55.0	55.7	.0099	1.968	3.875	8.542	-0.0001	-0.001
200.219	2847.8	285.1	12.0	53.6	58.3	.0103	2.057	4.051	8.930	-0.0001	-0.001
199.935	2843.7	284.4	11.3	52.3	64.9	.0114	2.291	4.512	9.947	-0.0001	-0.001
201.355	2863.9	283.6	10.5	50.8	71.8	.0125	2.535	4.991	11.004	-0.0001	-0.001
*****	*****	*****	******	******							
200.148	2846.8	291.8	18.7	65.6							
1.456	20.7	4.0	4.0	7.2	DEVIATIONS						

TABLE 5

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 22C TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TEST SPECIMEN (S/N 022) INLET PRESSURE = 415 PSIA NOMINAL.

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSI_A)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSI_A)	TEMP (DEG. F)	PRESSURE (PSI_A)	T_{AVG} TEMP (DEG. F)	$FLOW_{AVG}$ RATE (ACFM)
.70	50.1	81.3	.71	48.7	82.8	420.0	82.0	.0829
.60	50.9	81.2	.60	49.9	82.7	419.4	81.9	.0721
.50	50.7	81.1	.50	49.9	82.5	419.4	81.8	.0603
.41	50.5	80.9	.40	49.9	82.5	418.7	81.7	.0486
.31	50.3	80.9	.30	50.1	82.5	418.7	81.7	.0369
.26	50.3	81.1	.25	49.9	82.6	418.7	81.8	.0306
.21	50.1	81.1	.20	49.9	82.6	418.7	81.8	.0247
.14	50.3	81.3	.13	50.1	82.8	418.7	82.0	.0164
.15	49.5	81.5	.14	49.5	82.8	418.7	82.2	.0169
.22	50.5	81.5	.21	50.2	82.8	418.7	82.2	.0262
.26	50.3	81.3	.25	50.1	82.8	418.7	82.0	.0311
.32	50.3	81.3	.31	49.9	82.8	418.1	82.0	.0374
.41	49.7	81.1	.40	49.3	82.7	418.1	81.9	.0482
.51	50.1	80.9	.51	49.3	82.5	417.4	81.7	.0604
.59	49.9	80.9	.60	48.9	82.4	416.8	81.6	.0704
.69	50.3	81.0	.71	48.9	82.3	416.1	81.6	.0829

TABLE 5

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 22C TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TEST SPECIMEN (S/N 022) INLET PRESSURE = 415 PSIA NOMINAL.

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
420.0	82.0	.0829	295.292	295.292	295.292	.001	295.291
419.9	81.9	.0721	214.385	214.385	214.385	.001	214.384
419.9	81.8	.0603	159.709	159.709	159.709	.000	159.708
418.7	81.7	.0486	115.778	115.778	115.778	.000	115.777
418.7	81.7	.0369	80.239	80.697	80.468	.000	80.467
418.7	81.8	.0306	63.281	63.631	63.456	.000	63.455
418.7	81.8	.0247	48.245	48.776	48.511	.000	48.510
418.7	82.0	.0184	30.476	30.591	30.533	-0.000	30.533
418.7	82.2	.0169	31.578	31.741	31.659	.000	31.658
418.7	82.2	.0262	52.254	52.885	52.569	.000	52.569
418.7	82.0	.0311	64.658	65.211	64.934	.000	64.933
418.1	82.0	.0374	81.476	81.961	81.719	.000	81.718
418.1	81.9	.0482	115.778	115.778	115.778	.000	115.777
417.4	81.7	.0604	161.605	161.605	161.605	.000	161.604
416.8	81.6	.0704	210.276	210.276	210.276	.001	210.275
416.1	81.6	.0829	297.505	297.505	297.505	.001	297.504

TARE DIFF. PRESS = -3.40000E-05 + -4.44000E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 5

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 22C TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TEST SPECIMEN (S/N 022) INLET PRESSURE = 415 PSIA NOMINAL.

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN_2 KG/HR	GN_2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.530	420.0	301.0	27.8	82.0	65.6	.0829	2.317	4.563	10.059	20.7611	295.291
29.484	419.4	300.9	27.7	81.9	56.7	.0721	2.010	3.958	8.727	15.0727	214.384
29.484	419.4	300.8	27.7	81.8	47.3	.0603	1.684	3.316	7.311	11.2286	159.708
29.438	418.7	300.8	27.6	81.7	37.8	.0486	1.353	2.664	5.873	8.1400	115.777
29.438	418.7	300.8	27.6	81.7	28.7	.0369	1.028	2.023	4.461	5.6574	80.467
29.438	418.7	300.8	27.7	81.8	23.6	.0306	.854	1.681	3.705	4.4613	63.455
29.438	418.7	300.8	27.7	81.8	19.1	.0247	.689	1.356	2.989	3.4106	48.510
29.438	418.7	300.9	27.8	82.0	12.4	.0164	.457	.900	1.985	2.1467	30.533
29.438	418.7	301.0	27.9	82.2	12.9	.0169	.471	.927	2.044	2.2258	31.658
29.438	418.7	301.0	27.9	82.2	20.2	.0272	.730	1.438	3.170	3.6959	52.569
29.438	418.7	301.0	27.8	82.0	24.0	.0311	.866	1.705	3.760	4.5653	64.933
29.393	418.1	300.9	27.8	82.0	28.9	.0374	1.039	2.046	4.511	5.7453	81.718
29.393	418.1	300.9	27.7	81.9	37.5	.0492	1.340	2.639	5.818	8.1400	115.777
29.347	417.4	300.8	27.6	81.7	47.1	.0604	1.677	3.301	7.278	11.3619	161.604
29.302	416.8	300.7	27.6	81.6	55.1	.0704	1.954	3.847	8.481	14.7838	210.275
29.256	416.1	300.7	27.6	81.6	65.1	.0829	2.296	4.522	9.969	20.9166	297.504
*****	*****	*****	******	******							
29.419	418.4	300.9	27.7	81.9							
.050	.7	.1	.1	.1	DEVIATIONS						

TABLE 6
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 8-25-76

TEST NUMBER 5 PART 225 TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TEST SPECIMEN (S/N 022) INLET PRESSURE = 700 PSIA NOMINAL.

FLOWMETER ONE			FLOWMETER TWO			TEST SPECIMEN INLET CONDITIONS		
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.87	49.7	83.1	.90	47.6	85.5	719.6	84.2	.0597
.79	49.8	83.3	.81	47.9	85.1	719.6	83.6	.0540
.69	50.2	83.9	.71	48.9	84.7	719.6	83.3	.0481
.61	50.3	83.7	.61	48.9	84.6	719.6	83.1	.0417
.50	49.7	83.7	.5	48.9	84.6	719.6	83.1	.0343
.41	50.1	83.1	.40	49.5	84.7	719.6	83.4	.0282
.32	49.9	82.3	.31	49.3	84.9	719.6	83.6	.0220
.27	49.5	82.7	.26	49.3	85.1	719.6	83.9	.0181
.21	49.7	83.1	.21	49.5	85.4	719.6	84.3	.0144
.14	49.7	83.7	.13	49.5	85.6	719.6	84.7	.0095
.14	50.2	84.4	.13	50.1	86.1	719.6	85.2	.0095
.24	50.1	84.2	.23	49.9	86.	719.6	85.1	.0163
.27	50.1	84.1	.25	49.9	86.	719.6	85.0	.0181
.31	50.2	83.9	.30	49.9	86.	719.6	84.9	.0214
.42	50.2	83.3	.41	49.7	85.8	719.6	84.5	.0287
.51	50.1	82.9	.50	49.3	85.6	719.6	84.2	.0350
.59	50.1	82.4	.59	49.1	85.3	715.7	83.8	.0409
.69	49.9	82.	.71	48.5	85.1	715.7	83.5	.0481
.77	50.2	81.4	.81	48.5	84.4	715.7	82.9	.0544
.84	51.2	81.2	.91	48.3	84.1	715.7	82.6	.0602

TEST NUMBER 5 PART 228 TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TEST SPECIMEN (S/N 022) INLET PRESSURE = 700 PSIA NOMINAL.

TEST SPECIMEN INLET CONDITIONS

AVG PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
719.6	84.2	.0597	152.565	152.565	152.565	-0.000	152.565
719.6	83.6	.0540	133.310	133.310	133.310	-0.000	133.310
719.6	83.3	.0481	114.371	114.371	114.371	-0.000	114.371
719.6	83.1	.0417	94.404	95.116	94.760	-0.001	94.760
719.6	83.1	.0343	73.737	74.283	74.010	-0.001	74.010
719.6	83.4	.0282	57.852	58.501	58.177	-0.001	58.177
719.6	83.6	.0220	43.648	43.819	43.734	-0.001	43.734
719.6	83.9	.0181	34.667	34.726	34.697	-0.001	34.697
719.6	84.3	.0144	26.498	26.633	26.566	-0.001	26.566
719.6	84.7	.0095	16.59	16.562	16.576	-0.001	16.576
719.6	85.2	.0095	16.764	16.9.5	16.834	-0.001	16.834
719.6	85.1	.0163	30.496	30.706	30.601	-0.001	30.601
719.6	85.0	.0181	34.494	34.669	34.581	-0.001	34.581
719.6	84.9	.0214	42.084	42.321	42.203	-0.001	42.203
719.6	84.5	.0287	59.231	59.763	59.497	-0.001	59.497
719.6	84.2	.0350	75.853	76.493	76.173	-0.001	76.173
715.7	83.8	.0409	91.618	92.591	92.105	-0.001	92.105
715.7	83.5	.0481	114.055	114.055	114.055	-0.000	114.055
715.7	82.9	.0544	135.520	135.520	135.520	-0.000	135.520
715.7	82.6	.0602	157.615	157.615	157.615	-0.000	157.615

TARE DIFF. PRESS = 3.60000E-04 + 3.31610E-02 (ACFM) + 6.33359E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 6

FLOW-RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 8-25-76

TEST NUMBER 5 PART 22B TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TEST SPECIMEN (S/N 022) INLET PRESSURE = 700 PSIA NOMINAL.

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
50.594	719.6	302.2	29.0	84.2	80.4	.0597	2.845	5.601	12.349	10.7264	152.565
50.594	719.6	301.8	28.7	83.6	73.1	.0540	2.579	5.079	11.197	9.3726	133.310
50.594	719.6	301.7	28.5	83.3	64.8	.0481	2.298	4.524	9.974	8.0411	114.371
50.594	719.6	301.6	28.4	83.1	55.9	.0417	1.992	3.922	8.647	6.6623	94.760
50.594	719.6	301.6	28.4	83.1	45.7	.0343	1.638	3.224	7.108	5.2034	74.010
50.594	719.6	301.7	28.5	83.4	37.3	.0282	1.345	2.649	5.840	4.0902	58.177
50.594	719.6	301.8	28.7	83.6	29.1	.0220	1.050	2.067	4.558	3.0748	43.734
50.594	719.6	302.0	28.8	83.9	23.8	.0181	.863	1.699	3.745	2.4394	34.697
50.594	719.6	302.2	29.0	84.3	19.0	.0144	.688	1.354	2.986	1.8678	26.566
50.594	719.6	302.4	29.3	84.7	12.3	.0095	.452	.890	1.963	1.1654	16.576
50.594	719.6	302.7	29.6	85.2	12.3	.0095	.454	.894	1.971	1.1836	16.834
50.594	719.6	302.7	29.5	85.1	21.5	.0163	.776	1.528	3.368	2.1515	30.601
50.594	719.6	302.6	29.4	85.0	23.7	.0181	.860	1.693	3.733	2.4313	34.581
50.594	719.6	302.5	29.4	84.9	28.2	.0214	1.018	2.005	4.421	2.9671	42.203
50.594	719.6	302.4	29.2	84.5	38.0	.0287	1.367	2.692	5.935	4.1831	59.497
50.594	719.6	302.2	29.0	84.2	46.7	.0350	1.669	3.287	7.247	5.3555	76.173
50.318	715.7	302.0	28.8	83.8	54.5	.0409	1.942	3.824	8.430	6.4756	92.105
50.318	715.7	301.8	28.6	83.5	64.3	.0481	2.282	4.493	9.906	8.0189	114.056
50.318	715.7	301.5	28.3	82.9	73.6	.0544	2.587	5.094	11.230	9.5280	135.520
50.318	715.7	301.3	28.1	82.6	82.6	.0602	2.865	5.641	12.436	11.0815	157.615
50.539	718.8	302.0	28.9	84.0							
.088	1.3	.4	.4	.7	DEVIATIONS						

TABLE 7
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 8-25-76

TEST NUMBER 5 PART 22A TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TEST SPECIMEN (S/N 022) INLET PRESSURE = 1000 PSIA NOMINAL.

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.88	50.2	77.2	.92	48.3	82.2	1011.9	79.7	.0437
.78	50.4	76.5	.81	48.7	81.6	1011.9	79.0	.0390
.69	50.4	76.4	.71	49.1	81.3	1011.9	78.8	.0344
.60	49.7	76.4	.61	48.7	81.2	1015.9	78.8	.0293
.50	49.9	76.6	.50	49.1	81.4	1011.9	79.0	.0246
.41	49.9	77.3	.41	49.3	81.6	1015.9	79.5	.0200
.31	49.7	77.8	.30	49.3	81.9	1015.9	79.9	.0149
.26	50.1	78.3	.25	49.9	82.3	1015.9	80.3	.0126
.22	49.9	78.9	.21	49.7	82.5	1015.9	80.7	.0104
.16	50.1	79.6	.15	49.9	82.9	1015.9	81.2	.0074
.16	50.4	81.0	.15	50.2	83.6	1015.9	82.3	.0075
.23	49.5	81.9	.22	49.3	83.6	1015.9	82.3	.0108
.27	49.7	81.8	.26	49.3	83.6	1015.9	82.2	.0130
.32	49.7	81.6	.31	49.3	83.6	1015.9	82.1	.0151
.41	49.9	81.1	.41	49.3	83.5	1015.9	81.8	.0200
.50	49.9	79.3	.50	49.1	83.2	1015.9	81.2	.0245
.60	50.4	78.5	.61	49.5	82.8	1011.9	80.6	.0298
.69	50.4	77.9	.71	49.1	82.4	1011.9	80.2	.0343
.78	50.4	77.1	.80	48.9	81.8	1011.9	79.4	.0387
.87	50.2	76.4	.91	48.3	81.1	1011.9	78.7	.0434

TABLE 7
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 8-25-76

TEST NUMBER 5 PART 22A TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TEST SPECIMEN (S/N 022) INLET PRESSURE = 1000 PSIA NOMINAL.

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1011.9	79.7	.0437	111.320	111.320	111.320	=0.000	111.320
1011.9	79.0	.0390	96.484	96.484	96.484	=0.000	96.484
1011.9	78.8	.0344	82.095	82.595	82.345	=0.000	82.345
1015.9	78.8	.0293	67.535	68.076	67.805	=0.000	67.805
1011.9	79.0	.0246	54.132	54.503	54.317	=0.000	54.318
1015.9	79.5	.0200	42.760	42.917	42.838	=0.000	42.839
1015.9	79.9	.0149	30.245	30.381	30.313	=0.000	30.313
1015.9	80.3	.0126	24.914	24.876	24.895	=0.000	24.896
1015.9	80.7	.0104	20.047	20.011	20.029	=0.000	20.029
1015.9	81.2	.0074	13.558	13.611	13.585	=0.000	13.585
1015.9	82.3	.0075	13.732	13.840	13.786	=0.000	13.786
1015.9	82.3	.0138	20.800	20.869	20.835	=0.000	20.835
1015.9	82.2	.0130	25.899	25.965	25.932	=0.000	25.932
1015.9	82.1	.0151	30.824	31.012	30.918	=0.000	30.918
1015.9	81.8	.0200	42.586	42.744	42.665	=0.000	42.665
1015.9	81.2	.0245	54.258	54.818	54.538	=0.000	54.538
1011.9	80.6	.0298	68.418	69.022	68.716	=0.000	68.716
1011.9	80.2	.0343	81.847	82.280	82.064	=0.000	82.064
1011.9	79.4	.0387	95.853	95.853	95.853	=0.000	95.853
1011.9	78.7	.0434	110.688	110.688	110.688	=0.000	110.689

TARE DIFF. PRESS = -1.64000E-04 + -1.26930E-02 (ACFM) + 2.48070E-01 (ACFM)**2. + 0. (ACFM)**3.

TABLE 7
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 22A TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TEST SPECIMEN (S/N 022) INLET PRESSURE = 1000 PSIA NOMINAL.

TEST SPECIMEN INLET CONDITIONS

PRESSURE		TEMPERATURE			FLOW RATE					NET DIFFERENTIAL PRESS.	
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ.CM DIFFERENTIAL	PSID
71.144	1011.9	299.7	26.5	79.7	83.9	.1437	2.951	5.810	12.809	7.8266	111.320
71.144	1011.9	299.3	26.1	79.0	74.9	.0390	2.641	5.201	11.466	6.7835	96.484
71.144	1011.9	299.2	26.0	78.8	65.9	.0344	2.332	4.591	10.121	5.7894	82.345
71.423	1015.9	299.2	26.	78.8	56.1	.0293	1.994	3.926	8.655	4.7672	67.805
71.144	1011.9	299.3	26.1	79.0	46.8	.0246	1.668	3.284	7.241	3.8189	54.318
71.423	1015.9	299.5	26.4	79.5	37.9	.0200	1.361	2.680	5.909	3.0119	42.839
71.423	1015.9	299.8	26.6	79.9	28.1	.0149	1.013	1.995	4.399	2.1312	30.313
71.423	1015.9	300.0	26.8	80.3	23.6	.0126	.856	1.686	3.716	1.7503	24.896
71.423	1015.9	300.2	27.0	80.7	19.5	.0104	.706	1.391	3.066	1.4082	20.029
71.423	1015.9	300.5	27.4	81.2	13.7	.0074	.501	.987	2.176	.9551	13.585
71.423	1015.9	301.1	27.9	82.3	13.7	.0075	.504	.993	2.189	.9693	13.786
71.423	1015.9	301.1	27.9	82.3	20.1	.0108	.727	1.431	3.154	1.4648	20.835
71.423	1015.9	301.0	27.9	82.2	24.4	.0131	.881	1.735	3.825	1.8232	25.932
71.423	1015.9	301.0	27.8	82.1	28.4	.0151	1.023	2.014	4.441	2.1738	30.918
71.423	1015.9	300.8	27.7	81.8	37.6	.0200	1.350	2.658	5.860	2.9997	42.665
71.423	1015.9	300.5	27.4	81.2	46.6	.0245	1.661	3.271	7.210	3.8344	54.538
71.144	1011.9	300.2	27.0	80.6	56.6	.0298	2.009	3.956	8.721	4.8312	68.716
71.144	1011.9	299.9	26.8	80.2	65.4	.0343	2.317	4.562	10.058	5.7697	82.064
71.144	1011.9	299.5	26.3	79.4	74.3	.0387	2.619	5.156	11.368	6.7391	95.853
71.144	1011.9	299.1	26.0	78.7	83.4	.0434	2.936	5.781	12.746	7.7822	110.689
*****	*****	*****	******	******							
71.311	1014.3	300.0	26.9	80.4							
.134	1.9	.6	.6	1.1	DEVIATIONS						

TABLE 8

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 23C TEST DESCRIPTION

CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA ACQUIRED ~~AFTER 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES~~. FLOW IN FORWARD DIRECTION. TEST SPECIMEN (S/N 023) INLET PRESSURE = 415 PSIA NOMINAL. DATA OBTAINED AFTER PROOF TEST.

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSI_A)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSI_A)	TEMP (DEG. F)	PRESSURE (PSI_A)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.79	50.1	81.7	.81	48.3	82.7	413.7	82.2	.0951
.69	49.9	81.7	.71	48.5	82.8	413.0	82.2	.0834
.61	49.9	81.6	.61	48.7	82.9	413.0	82.2	.0727
.51	49.9	81.7	.51	49.1	83.0	412.4	82.3	.0611
.42	49.7	81.7	.41	49.3	83.2	412.4	82.5	.0495
.32	50.2	82.0	.31	49.9	83.4	412.4	82.7	.0382
.27	50.4	82.1	.26	50.0	83.6	412.4	82.8	.0319
.22	50.1	82.3	.21	49.9	83.7	412.4	83.0	.0260
.16	50.4	82.7	.14	50.2	84.0	412.4	83.4	.0183
.16	49.9	82.9	.14	49.9	84.2	412.4	83.6	.0181
.23	50.2	82.7	.22	49.9	84.1	412.4	83.4	.0270
.27	49.9	82.6	.26	49.5	84.1	412.4	83.3	.0318
.32	50.2	82.3	.31	49.9	84.0	412.4	83.2	.0382
.42	50.2	82.0	.41	49.7	83.9	411.7	82.9	.0501
.51	50.1	81.7	.51	49.3	83.6	411.1	82.6	.0613
.60	50.1	81.5	.60	49.1	83.4	410.4	82.4	.0728
.69	49.9	81.4	.71	48.5	83.1	410.4	82.2	.0840
.77	50.4	82.0	.79	48.9	82.9	409.1	82.4	.0944

TABLE 8
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 23C TEST DESCRIPTION

CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA ACQUIRED AFTER 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN2 IMPACT CYCLES. FLOW IN FORWARD DIRECTION. TEST SPECIMEN (S/N 023) INLET PRESSURE = 415 PSIA NOMINAL. DATA OBTAINED AFTER PROOF TEST.

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
413.7	82.2	.0951	303.085	303.085	303.085	.001	303.084
413.0	82.2	.0834	221.546	221.546	221.546	.001	221.545
413.0	82.2	.0727	174.456	174.456	174.456	.001	174.455
412.7	82.3	.0611	133.370	133.370	133.370	.001	133.369
412.4	82.5	.0495	98.922	98.922	98.922	.000	98.920
412.4	82.7	.0382	69.577	70.162	69.869	.000	69.868
412.4	82.8	.0319	55.805	56.572	56.189	.000	56.187
412.4	83.0	.0260	44.112	44.355	44.234	.000	44.232
412.4	83.4	.0183	29.511	29.614	29.563	.000	29.561
412.4	83.6	.0181	29.105	29.327	29.216	.000	29.215
412.4	83.4	.0270	46.545	46.458	46.502	.000	46.501
412.4	83.3	.0318	55.680	56.256	55.968	.000	55.967
412.4	83.2	.0382	70.202	70.794	70.498	.000	70.496
411.7	82.9	.0501	100.818	100.818	100.818	.000	100.816
411.1	82.6	.0613	134.318	134.318	134.318	.001	134.317
410.7	82.4	.0728	175.720	175.720	175.720	.001	175.719
410.4	82.2	.0840	226.919	226.919	226.919	.001	226.918
409.1	82.4	.0944	298.977	298.977	298.977	.001	298.976

TARE DIFF. PRESS = -3.40000E-05 + -4.44000E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 8
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 23C TEST DESCRIPTION: CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA ACQUIRED AFTER 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. FLOW IN FORWARD DIRECTION. TEST SPECIMEN (S/N 023) INLET PRESSURE = 415 PSIA NOMINAL. DATA OBTAINED AFTER PROOF TEST.

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/ MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.083	413.7	301.1	27.9	82.2	74.1	.0951	2.616	5.151	11.355	21.3089	303.084
29.037	413.0	301.1	27.9	82.2	64.9	.0834	2.292	4.512	9.948	15.5762	221.545
29.037	413.0	301.1	27.9	82.2	56.6	.0727	1.997	3.933	8.670	12.2654	174.455
28.991	412.4	301.1	28.0	82.3	47.4	.0611	1.675	3.299	7.273	9.3768	133.389
28.991	412.4	301.2	28.0	82.5	38.4	.0495	1.357	2.673	5.893	6.9548	98.928
28.991	412.4	301.3	28.2	82.7	29.6	.0382	1.046	2.059	4.539	4.9122	69.868
28.991	412.4	301.4	28.2	82.8	24.8	.0319	.874	1.722	3.796	3.9504	56.187
28.991	412.4	301.5	28.3	83.0	20.2	.0260	.712	1.402	3.090	3.1098	44.232
28.991	412.4	301.7	28.5	83.4	14.2	.0183	.501	.986	2.173	2.0784	29.561
28.991	412.4	301.8	28.7	83.6	14.0	.0181	.496	.976	2.151	2.0540	29.215
28.991	412.4	301.7	28.6	83.4	20.9	.0270	.738	1.453	3.204	3.2693	46.501
28.991	412.4	301.7	28.5	83.3	24.6	.0318	.869	1.712	3.773	3.9348	55.967
28.991	412.4	301.6	28.4	83.2	29.6	.0382	1.045	2.057	4.535	4.9564	70.496
28.946	411.7	301.4	28.3	82.9	38.8	.0501	1.369	2.696	5.945	7.0881	100.816
28.900	411.1	301.3	28.1	82.6	47.4	.0613	1.676	3.299	7.273	9.4434	134.317
28.855	410.4	301.2	28.0	82.4	56.2	.0728	1.985	3.909	8.618	12.3543	175.719
28.855	410.4	301.1	27.9	82.2	64.9	.0840	2.292	4.512	9.948	15.9539	226.918
28.764	409.1	301.2	28.0	82.4	72.7	.0944	2.568	5.057	11.149	21.0201	298.976
*****	*****	*****	******	******							
28.966	412.3	301.4	28.2	82.8							
.057	.5	.2	.2	.4	DEVIATIONS						

TABLE 9
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 23A TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA ACQUIRED AFTER 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 INCACT CYCLES. FLOW IN FORWARD DIRECTION. TEST SPECIMEN (S/N 023) INLET PRESSURE = 1000 PSIA NOMINAL. DATA OBTAINED AFTER PROOF TEST.

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.86	50.1	75.5	.91	47.9	80.4	1011.9	77.9	.0429
.78	50.2	75.1	.81	48.5	79.9	1011.9	77.5	.0389
.69	49.9	75.1	.71	48.5	79.6	1011.9	77.4	.0340
.61	50.1	75.3	.61	48.9	79.6	1011.9	77.5	.0298
.51	50.1	75.8	.51	49.3	80.0	1015.9	77.9	.0280
.41	49.7	76.4	.41	49.1	80.3	1015.9	78.4	.0200
.32	50.1	77.4	.31	49.9	80.8	1015.9	79.1	.0154
.27	50.2	78.0	.26	49.9	81.2	1015.9	79.6	.0132
.22	50.2	78.6	.21	50.0	81.5	1015.9	80.0	.0107
.14	49.7	79.4	.13	49.5	81.9	1015.9	80.7	.0068
.14	50.1	80.8	.13	49.9	82.7	1011.9	81.7	.0060
.23	49.9	80.8	.23	49.7	82.7	1015.9	81.7	.0113
.27	49.9	81.7	.26	49.5	82.9	1015.9	81.8	.0131
.32	50.1	80.5	.31	49.9	82.9	1011.9	81.7	.0156
.41	50.1	80.0	.41	49.7	82.8	1011.9	81.4	.0203
.51	50.6	79.2	.51	49.9	82.5	1015.9	80.8	.0250
.60	50.1	78.3	.60	49.1	82.0	1011.9	80.1	.0293
.70	50.1	77.5	.71	48.7	81.5	1011.9	79.5	.0344
.78	50.4	76.8	.81	48.9	81.0	1011.9	78.9	.0391
.87	50.4	76.2	.92	48.3	80.3	1011.9	78.2	.0435

TABLE 9
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 23A TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA ACQUIRED AFTER 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. FLOW IN FORWARD DIRECTION. TEST SPECIMEN (S/N 023) INLET PRESSURE - 1000 PSIA NOMINAL. DATA OBTAINED AFTER PROOF TEST.

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1011.9	77.9	.0429	93.076	93.865	93.470	=0.000	93.471
1011.9	77.5	.0389	82.300	83.119	82.710	=0.000	82.710
1011.9	77.4	.0340	69.618	70.478	70.048	=0.000	70.048
1011.9	77.5	.0298	59.354	60.048	59.701	=0.000	59.701
1015.9	77.9	.0250	47.952	48.671	48.311	=0.000	48.311
1015.9	78.4	.0200	37.603	37.668	37.636	=0.000	37.636
1015.9	79.1	.0154	27.522	27.547	27.535	=0.000	27.535
1015.9	79.6	.0132	22.944	22.958	22.951	=0.000	22.952
1015.9	80.0	.0107	18.019	17.975	17.997	=0.000	17.997
1015.9	80.7	.0068	10.951	10.944	10.947	=0.000	10.947
1011.9	81.7	.0068	11.009	11.115	11.062	=0.000	11.062
1015.9	81.7	.0113	19.004	19.120	19.062	=0.000	19.062
1015.9	81.8	.0131	22.713	22.843	22.778	=0.000	22.778
1011.9	81.7	.0156	27.869	28.064	27.967	=0.000	27.967
1011.9	81.4	.0203	38.009	38.186	38.098	=0.000	38.098
1015.9	80.8	.0250	47.952	48.671	48.311	=0.000	48.311
1011.9	80.1	.0293	57.976	58.784	58.380	=0.000	58.380
1011.9	79.5	.0344	70.742	71.426	71.084	=0.000	71.084
1011.9	78.9	.0391	83.041	84.067	83.554	=0.000	83.554
1011.9	78.2	.0435	96.393	96.393	96.393	=0.000	96.393

TARE DIFF. PRESS = -1.64000E-04 + -1.26930E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 9
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 23A TEST DESCRIPTION: CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA ACQUIRED AFTER 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. FLOW IN FORWARD DIRECTION. TEST SPECIMEN (S/N 023) INLET PRESSURE = 1000 PSIA NOMINAL. DATA OBTAINED AFTER PROOF TEST.

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
71.144	1011.2	298.7	25.5	77.9	82.4	.0429	2.911	5.736	12.637	6.5716	93.471
71.144	1011.2	298.4	25.3	77.5	74.8	.0389	2.643	5.209	11.474	5.8151	82.710
71.144	1011.2	298.4	25.2	77.4	65.3	.0340	2.307	4.546	10.014	4.9249	70.048
71.144	1011.2	298.4	25.3	77.5	57.4	.0298	2.026	3.989	8.794	4.1974	59.701
71.423	1015.2	298.7	25.5	77.9	48.2	.0250	1.702	3.351	7.387	3.3966	48.311
71.423	1015.2	298.9	25.8	78.4	38.6	.0200	1.362	2.683	5.914	2.6461	37.636
71.423	1015.2	299.3	26.2	79.1	29.7	.0154	1.048	2.063	4.548	1.9359	27.535
71.423	1015.2	299.6	26.4	79.6	25.4	.0132	.896	1.765	3.890	1.6137	22.952
71.423	1015.2	299.8	26.7	80.0	20.6	.0107	.727	1.432	3.156	1.2653	17.997
71.423	1015.2	300.2	27.0	80.7	13.0	.0068	.459	.903	1.991	.7697	10.947
71.144	1011.2	300.8	27.6	81.7	13.1	.0068	.461	.908	2.002	.7777	11.062
71.423	1015.2	300.8	27.6	81.7	21.6	.0113	.761	1.499	3.305	1.3402	19.062
71.423	1015.2	300.8	27.7	81.8	25.0	.0131	.883	1.738	3.833	1.6015	22.778
71.144	1011.2	300.8	27.6	81.7	29.8	.0156	1.054	2.075	4.575	1.9063	27.967
71.144	1011.2	300.6	27.4	81.4	38.8	.0203	1.371	2.699	5.950	2.6785	38.100
71.423	1015.2	300.3	27.1	80.8	48.0	.0250	1.695	3.337	7.356	3.3966	48.311
71.144	1011.2	299.9	26.7	80.1	56.1	.0293	1.980	3.898	8.593	4.1045	58.393
71.144	1011.2	299.6	26.4	79.5	66.0	.0344	2.329	4.587	10.112	4.9277	70.093
71.144	1011.2	299.2	26.0	78.9	74.9	.0391	2.646	5.210	11.487	5.8745	83.554
71.144 *****	1011.2 *****	298.9 *****	25.7 ******	78.2 ******	83.6	.0435	2.952	5.812	12.814	6.7771	96.393
71.270	1013.7	299.6	26.4	79.6							
.138	2.0	.8	.8	1.4	DEVIATIONS						

TABLE 10
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 25C TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TEST SPECIMEN (S/N 025) INLET PRESSURE = 415 PSIA NOMINAL.

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.70	50.8	84.3	.74	49.3	85.5	419.5	84.9	.0869
.69	50.6	84.3	.71	49.3	85.3	418.8	84.8	.0833
.60	50.2	84.1	.61	49.3	85.1	418.2	84.6	.0716
.50	49.9	83.9	.50	49.1	85.0	418.2	84.5	.0596
.41	50.4	83.8	.41	49.9	84.8	418.2	84.3	.0489
.31	50.2	83.8	.30	49.9	84.8	418.2	84.3	.0364
.26	49.9	83.7	.26	49.5	84.7	418.2	84.2	.0309
.22	50.1	83.8	.21	49.9	84.8	418.2	84.3	.0254
.15	50.1	84.0	.14	49.9	85.0	418.2	84.5	.0170
.15	49.9	84.1	.14	49.7	85.1	418.8	84.6	.0168
.21	49.9	84.1	.21	49.9	85.1	418.2	84.6	.0252
.27	50.1	83.9	.26	49.9	84.9	418.2	84.4	.0315
.31	50.1	84.0	.30	49.7	85.1	418.2	84.6	.0366
.41	50.4	83.8	.40	49.9	85.0	417.5	84.4	.0487
.50	50.1	83.6	.50	49.3	84.8	417.5	84.2	.0595
.59	50.6	83.5	.60	49.5	84.7	416.9	84.1	.0717
.68	50.4	83.6	.70	49.3	84.7	416.2	84.2	.0825
.71	50.2	83.9	.74	48.9	84.8	416.2	84.4	.0862

TABLE 10
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 25C TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TEST SPECIMEN (S/N 025) INLET PRESSURE = 415 PSIA NOMINAL.

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
419.9	84.9	.0859	308.142	308.142	308.142	.001	308.141
418.8	84.8	.0833	276.222	276.222	276.222	.001	276.221
418.6	84.6	.0716	200.687	200.687	200.687	.001	200.686
418.6	84.5	.0596	147.908	147.908	147.908	.000	147.907
418.6	84.3	.0489	111.247	111.247	111.247	.000	111.246
418.6	84.3	.0364	75.521	75.850	75.685	.000	75.684
418.6	84.2	.0309	60.650	61.312	60.981	.000	60.980
418.6	84.3	.0254	48.515	48.355	48.435	.000	48.434
418.6	84.5	.0170	30.438	30.515	30.476	.000	30.475
418.8	84.6	.0168	30.206	30.400	30.303	.000	30.302
418.6	84.6	.0252	48.226	48.039	48.132	.000	48.131
418.6	84.4	.0315	62.654	63.209	62.931	.000	62.930
418.6	84.6	.0386	75.894	76.482	76.188	.000	76.187
417.5	84.4	.0487	111.247	111.247	111.247	.000	111.246
417.9	84.2	.0595	148.856	148.856	148.856	.000	148.855
416.9	84.1	.0717	203.532	203.532	203.532	.001	203.531
416.6	84.2	.0825	271.481	271.481	271.481	.001	271.480
416.6	84.4	.0862	307.826	307.826	307.826	.001	307.825

TARE DIFF. PRESS = -3.40000E-05 + -4.44000E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 10
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 25C TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE TEST SPECIMEN (S/N 025) INLET PRESSURE = 415 PSIA NOMINAL

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG K	DEG C	DEG F	LITERS/MIN.	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.493	419.5	302.5	29.4	84.9	67.5	.0859	2.384	4.695	10.351	21.6645	308.141
29.447	418.8	302.5	29.3	84.8	65.4	.0833	2.308	4.545	10.019	19.4203	276.221
29.402	418.2	302.4	29.2	84.6	56.1	.0716	1.982	3.904	8.606	14.1097	200.686
29.402	418.2	302.3	29.1	84.5	46.7	.0596	1.649	3.248	7.160	10.3989	147.907
29.402	418.2	302.2	29.1	84.3	38.3	.0489	1.354	2.667	5.879	7.0214	111.246
29.402	418.2	302.2	29.1	84.3	28.6	.0364	1.009	1.987	4.380	5.3211	75.686
29.402	418.2	302.2	29.0	84.2	24.3	.0309	.857	1.687	3.719	4.2873	60.988
29.402	418.2	302.2	29.1	84.3	20.0	.0254	.705	1.388	3.059	3.4052	48.434
29.402	418.2	302.3	29.2	84.5	13.3	.0170	.470	.926	2.042	2.1426	30.478
29.447	418.8	302.4	29.2	84.6	13.2	.0168	.466	.917	2.021	2.1304	30.302
29.402	418.2	302.4	29.2	84.6	19.7	.0252	.697	1.373	3.027	3.3840	48.131
29.402	418.2	302.3	29.1	84.4	24.7	.0315	.873	1.718	3.788	4.4044	62.670
29.402	418.2	302.4	29.2	84.6	28.7	.0366	1.013	1.995	4.397	5.3566	76.187
29.356	417.9	302.3	29.1	84.4	38.1	.0487	1.346	2.650	5.841	7.0214	111.246
29.356	417.9	302.2	29.0	84.2	46.6	.0595	1.645	3.240	7.142	10.4656	148.855
29.310	416.9	302.1	28.9	84.1	56.1	.0717	1.981	3.901	8.601	14.3096	203.531
29.265	416.4	302.1	29.0	84.2	64.4	.0825	2.275	4.479	9.874	19.0869	271.480
29.265	416.4	302.2	29.1	84.4	67.3	.0862	2.378	4.682	10.322	21.6423	307.825
*****	*****	*****	*****	*****							
29.380	418.0	302.3	29.1	84.4							
.042	.0	.1	.1	.2	DEVIATIONS						

TABLE 11
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER S-25 PART 25B TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TEST SPECIMEN (S/N 025) INLET PRESSURE = 700 PSIA NOMINAL.

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.87	49.9	72.6	.90	47.9	74.0	715.7	73.3	.0604
.78	50.2	72.7	.81	48.5	74.4	707.8	73.5	.0555
.70	49.9	73.0	.71	48.5	74.2	707.8	73.6	.0490
.59	49.9	73.6	.61	48.9	74.7	711.8	74.1	.0416
.50	50.4	74.0	.50	49.7	75.2	707.8	74.6	.0359
.40	49.9	74.7	.41	49.3	75.7	707.8	75.2	.0283
.30	50.2	75.4	.30	49.9	76.4	711.8	75.9	.0213
.26	50.2	75.8	.25	50.0	76.9	711.8	76.3	.0180
.21	50.4	76.2	.20	50.2	77.7	711.8	76.9	.0146
.14	50.4	76.5	.14	50.2	78.5	715.7	77.5	.0099
.14	49.9	77.4	.14	49.9	78.1	715.7	77.8	.0098
.22	50.1	77.4	.22	49.9	77.9	715.7	77.7	.0152
.26	50.1	77.4	.26	49.9	78.0	715.7	77.7	.0184
.31	49.9	77.2	.31	49.5	77.7	715.7	77.4	.0215
.41	49.9	76.8	.41	49.3	77.4	715.7	77.1	.0283
.49	50.1	76.2	.50	49.3	77.6	715.7	76.9	.0345
.58	50.2	75.7	.60	49.3	77.5	715.7	76.6	.0411
.67	50.4	75.2	.70	49.3	77.7	707.8	76.5	.0482
.75	50.6	74.6	.81	49.1	77.4	711.8	76.0	.0545
.85	50.2	74.5	.91	48.3	77.9	711.8	76.2	.0608

TABLE 11
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5-25 PART 25B TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TEST SPECIMEN (S/N 025) INLET PRESSURE = 700 PSIA NOMINAL.

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
715.7	73.3	.0604	144.853	144.853	144.853	-0.000	144.853
707.8	73.5	.0555	126.839	126.839	126.839	-0.000	126.839
707.9	73.6	.0490	107.560	107.560	107.560	-0.000	107.560
711.8	74.1	.0416	88.204	88.597	88.401	-0.001	88.401
707.9	74.6	.0353	70.991	71.531	71.261	-0.001	71.261
707.9	75.2	.0283	54.216	54.781	54.498	-0.001	54.498
711.8	75.9	.0213	39.824	40.087	39.956	-0.001	39.956
711.8	76.3	.0160	32.640	32.775	32.708	-0.001	32.708
711.8	76.9	.0146	25.571	25.596	25.583	-0.001	25.583
715.7	77.5	.0099	16.648	16.716	16.682	-0.001	16.682
715.7	77.8	.0098	16.416	16.544	16.480	-0.001	16.480
715.7	77.7	.0152	26.737	26.858	26.794	-0.001	26.794
715.7	77.7	.0184	33.393	33.638	33.516	-0.001	33.516
715.7	77.4	.0215	40.404	40.606	40.505	-0.001	40.505
715.7	77.1	.0283	55.093	55.729	55.411	-0.001	55.411
715.7	76.9	.0345	70.617	71.215	70.916	-0.001	70.916
715.7	76.6	.0411	88.204	88.913	88.559	-0.001	88.559
707.8	76.5	.0482	107.560	107.560	107.560	-0.000	107.560
711.8	76.7	.0545	127.787	127.787	127.787	-0.000	127.787
711.8	76.2	.0608	148.014	148.014	148.014	-0.000	148.014

TARE DIFF. PRESS = -3.60000E-04 + -3.31610E-02 (ACFM) + 6.33359E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 11
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5-25 PART 25B TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TEST SPECIMEN (S/N 025) INLET PRESSURE = 700 PSIA NOMINAL.

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS.	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/ MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
50.318	715.7	296.1	23.0	73.3	82.8	.0604	2.925	5.759	12.696	10.1842	144.853
49.765	707.8	296.2	23.1	73.5	75.2	.0555	2.657	5.232	11.534	8.9176	126.859
49.765	707.8	296.3	23.1	73.6	66.4	.0490	2.343	4.614	10.172	7.5822	107.859
50.041	711.8	296.6	23.4	74.1	56.6	.0416	1.997	3.933	8.671	6.2158	88.401
49.765	707.8	296.8	23.7	74.6	47.7	.0353	1.685	3.318	7.314	5.0102	71.261
49.765	707.8	297.2	24.0	75.2	38.2	.0283	1.348	2.653	5.850	3.8316	54.498
50.041	711.8	297.6	24.4	75.9	28.9	.0213	1.022	2.012	4.436	2.8092	39.955
50.041	711.8	297.8	24.6	76.3	24.5	.0180	.863	1.700	3.748	2.2996	32.708
50.041	711.8	298.1	25.0	76.9	19.8	.0146	.700	1.378	3.038	1.7987	25.583
50.318	715.7	298.4	25.3	77.5	13.4	.0099	.474	.934	2.060	1.1729	16.682
50.318	715.7	298.6	25.4	77.8	13.3	.0098	.470	.925	2.039	1.1587	16.480
50.318	715.7	298.5	25.4	77.7	20.7	.0152	.730	1.438	3.171	1.8838	26.794
50.318	715.7	298.6	25.4	77.7	24.9	.0184	.881	1.734	3.823	2.3564	33.516
50.318	715.7	298.4	25.2	77.4	29.3	.0215	1.034	2.036	4.488	2.8478	40.505
50.318	715.7	298.2	25.0	77.1	38.5	.0283	1.360	2.678	5.903	3.8958	55.411
50.318	715.7	298.1	24.9	76.9	47.0	.0345	1.659	3.268	7.204	4.9859	70.916
50.318	715.7	297.9	24.8	76.6	56.0	.0411	1.978	3.894	8.586	6.2263	88.569
49.765	707.8	297.9	24.7	76.5	64.9	.0482	2.291	4.510	9.943	7.5622	107.560
50.041	711.8	297.6	24.5	76.0	73.9	.0545	2.610	5.140	11.331	8.9843	127.787
50.041	711.8	297.7	24.5	76.2	82.4	.0608	2.910	5.729	12.631	10.4064	148.014
*****	*****	*****	******	******							
50.097	712.5	297.6	24.5	76.0							
.199	2.8	.7	.7	1.2	DEVIATIONS						

TABLE 12
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5-25 PART 25A TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TEST SPECIMEN (S/N 025) INLET PRESSURE = 1000 PSIA NOMINAL.

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.84	50.2	68.3	.90	48.3	73.7	1007.9	71.0	.0425
.76	50.6	68.0	.81	48.9	73.3	1007.9	70.6	.0389
.67	49.9	68.	.71	48.3	73.2	1007.9	70.6	.0334
.58	49.7	68.3	.61	48.5	73.2	1007.9	70.7	.0290
.49	49.7	68.8	.50	48.9	73.5	1007.9	71.1	.0244
.40	49.7	69.4	.40	49.1	73.8	1007.9	71.6	.0197
.30	50.1	70.1	.31	49.9	74.2	1007.9	72.1	.0151
.26	49.7	71.8	.26	49.5	74.6	1007.9	72.7	.0128
.21	49.9	71.4	.21	49.7	74.9	1007.9	73.1	.0103
.14	49.5	72.3	.14	49.1	75.4	1007.9	73.8	.0068
.14	50.1	73.6	.14	49.9	76.2	1007.9	74.9	.0069
.24	50.2	73.7	.24	49.9	76.4	1007.9	75.0	.0118
.27	50.4	73.7	.26	50.2	76.4	1007.9	75.1	.0133
.31	49.9	73.5	.31	49.5	76.6	1007.9	75.0	.0152
.40	50.4	73.0	.40	49.9	76.4	1007.9	74.7	.0198
.48	50.1	72.4	.49	49.3	76.2	1007.9	74.3	.0241
.58	50.2	71.4	.60	49.1	75.6	1007.9	73.5	.0290
.66	50.2	70.5	.70	49.1	75.1	1007.9	72.8	.0336
.75	50.4	70.0	.80	48.7	74.6	1007.9	72.3	.0381
.85	50.4	69.3	.90	48.3	74.0	1007.9	71.7	.0428

TABLE 12
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5-25 PART 25A TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TEST SPECIMEN (S/N 025) INLET PRESSURE = 1000 PSIA NOMINAL.

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1007.9	71.0	.0425	99.870	99.870	99.870	-0.000	99.870
1007.9	70.6	.0389	88.328	89.124	88.726	-0.000	88.726
1007.9	70.6	.0334	73.735	74.586	74.160	-0.000	74.161
1007.9	70.7	.0290	61.984	62.577	62.280	-0.000	62.280
1007.9	71.1	.0244	49.578	50.251	49.915	-0.000	49.915
1007.9	71.6	.0197	39.168	39.281	39.224	-0.000	39.225
1007.9	72.1	.0151	28.796	28.811	28.804	-0.000	28.804
1007.9	72.7	.0128	23.756	23.761	23.758	-0.000	23.758
1007.9	73.1	.0103	18.425	18.376	18.400	-0.000	18.401
1007.9	73.8	.0068	11.762	11.743	11.753	-0.000	11.753
1007.9	74.9	.0069	11.936	11.972	11.954	-0.000	11.954
1007.9	75.6	.0118	21.554	21.697	21.626	-0.000	21.626
1007.9	75.1	.0133	24.972	25.080	25.026	-0.000	25.026
1007.9	75.0	.0152	29.202	29.328	29.265	-0.000	29.265
1007.9	74.7	.0198	39.342	39.512	39.427	-0.000	39.427
1007.9	74.3	.0241	49.328	49.935	49.631	-0.000	49.632
1007.9	73.5	.0290	61.733	62.261	61.997	-0.000	61.997
1007.9	72.8	.0336	74.233	74.902	74.568	-0.000	74.568
1007.9	72.3	.0381	87.470	88.176	87.823	-0.000	87.823
1007.9	71.7	.0428	101.766	101.766	101.766	-0.000	101.766

TARE DIFF. PRESS = -1.64000E-04 + -1.26930E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 12
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5-25 PART 25A TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TEST SPECIMEN (S/N 025) INLET PRESSURE = 1000 PSIA NOMINAL.

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS:	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/ MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
70.865	1007.9	294.8	21.7	71.0	82.3	.0425	2.906	5.721	12.614	7.0216	99.870
70.865	1007.9	294.6	21.5	70.6	75.3	.0389	2.661	5.239	11.550	6.2381	88.726
70.865	1007.9	294.6	21.4	70.6	64.8	.0334	2.289	4.507	9.937	5.2140	74.161
70.865	1007.9	294.7	21.5	70.7	56.3	.0290	1.988	3.914	8.628	4.3788	62.288
70.865	1007.9	294.9	21.7	71.1	47.2	.0244	1.667	3.283	7.238	3.5094	49.915
70.865	1007.9	295.2	22.0	71.6	38.1	.0197	1.346	2.650	5.842	2.7578	39.225
70.865	1007.9	295.5	22.3	72.1	29.3	.0151	1.033	2.034	4.484	2.0251	28.804
70.865	1007.9	295.8	22.6	72.7	24.7	.0128	.871	1.715	3.781	1.6704	23.758
70.865	1007.9	296.0	22.9	73.1	19.8	.0103	.700	1.378	3.037	1.2937	18.401
70.865	1007.9	296.4	23.2	73.8	13.2	.0068	.465	.915	2.018	.8283	11.783
70.865	1007.9	297.0	23.8	74.9	13.3	.0069	.470	.926	2.041	.8404	11.954
70.865	1007.9	297.1	23.9	75.0	22.6	.0118	.798	1.572	3.466	1.5204	21.626
70.865	1007.9	297.1	23.9	75.1	25.6	.0133	.903	1.779	3.921	1.7595	25.026
70.865	1007.9	297.1	23.9	75.0	29.2	.0152	1.030	2.028	4.472	2.0575	29.265
70.865	1007.9	296.9	23.7	74.7	38.1	.0198	1.347	2.652	5.848	2.7720	39.427
70.865	1007.9	296.6	23.5	74.3	46.4	.0241	1.639	3.227	7.114	3.4894	49.632
70.865	1007.9	296.2	23.1	73.5	55.9	.0290	1.974	3.887	8.569	4.3588	61.997
70.865	1007.9	295.8	22.7	72.8	64.9	.0336	2.292	4.512	9.948	5.2426	74.588
70.865	1007.9	295.5	22.4	72.3	73.7	.0381	2.602	5.123	11.294	6.1746	87.883
70.865	1007.9	295.2	22.0	71.7	82.9	.0428	2.928	5.765	12.710	7.1549	101.766
*****	*****	*****	******	******							
70.865	1007.9	295.8	22.7	72.8							
.000	0	.8	.8	1.4	DEVIATIONS						

TABLE 13

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED ON TEST SPECIMEN (S/N 027) PRIOR TO THE ADDITION OF SYNTHETIC CONTAMINANT. TEST SPECIMEN INLET PRESSURE = 415 PSIA (NOMINAL).

TEST NUMBER 10 PART 278 TEST DESCRIPTION

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSI_A)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSI_A)	TEMP (DEG. F)	PRESSURE (PSI_A)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.76	49.9	69.2	.81	48.4	70.4	413.7	69.8	.0936
.67	50.3	69.2	.71	48.8	70.4	413.0	69.8	.0827
.58	50.5	68.9	.60	49.3	70.4	413.0	69.6	.0718
.49	50.5	68.8	.50	49.5	70.4	412.4	69.6	.0603
.40	50.3	68.7	.40	49.5	70.4	411.7	69.6	.0488
.31	50.3	68.8	.30	49.9	70.5	411.7	69.7	.0370
.26	50.5	68.9	.25	50.1	70.5	411.7	69.7	.0311
.21	50.1	69.1	.21	49.9	70.7	411.7	69.8	.0253
.14	49.7	69.2	.14	49.5	70.8	411.7	70.0	.0169
.14	50.3	69.4	.14	49.9	71.1	411.7	70.2	.0170
.22	50.3	69.2	.22	49.9	70.9	411.1	70.0	.0266
.26	50.5	69.1	.26	50.1	70.9	411.1	70.0	.0320
.31	50.7	68.9	.31	50.1	70.7	411.1	69.8	.0380
.41	49.9	68.6	.41	49.2	70.5	410.4	69.6	.0493
.50	50.1	68.2	.51	49.0	70.4	409.8	69.3	.0614
.58	50.3	68.2	.61	49.2	70.2	409.1	69.2	.0724
.67	50.3	68.0	.70	48.8	69.9	408.5	69.0	.0830
.75	49.9	68.5	.84	48.2	69.8	407.8	69.2	.0934

TABLE 13
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED ON TEST SPECIMEN (S/N 027) PRIOR TO THE ADDITION OF SYNTHETIC CONTAMINANT. TEST SPECIMEN INLET PRESSURE = 415 PSIA (NOMINAL).

TEST NUMBER 10 PART 27B TEST DESCRIPTION

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
413.7	69.8	.0936	302.835	302.835	302.835	.001	302.833
413.0	69.8	.0827	225.939	225.939	225.939	.001	225.938
413.0	69.6	.0718	176.258	176.258	176.258	.001	176.257
412.4	69.6	.0603	133.538	133.538	133.538	.000	133.537
411.7	69.6	.0488	98.413	98.413	98.413	.000	98.412
411.7	69.7	.0370	64.109	68.668	66.389	.000	66.387
411.6	69.7	.0311	50.817	55.694	53.255	.000	53.254
411.6	69.8	.0253	43.026	43.102	43.064	.000	43.062
411.7	70.0	.0169	26.898	26.968	26.933	.000	26.932
411.6	70.2	.0170	27.247	27.371	27.309	.000	27.307
411.1	70.0	.0266	46.802	45.884	46.343	.000	46.342
411.1	70.0	.0320	58.470	57.592	58.031	.000	58.030
411.1	69.8	.0380	72.600	71.832	72.216	.000	72.215
410.4	69.6	.0493	100.628	100.628	100.628	.000	100.627
409.8	69.3	.0614	138.918	138.918	138.918	.001	138.917
409.1	69.2	.0724	179.422	179.422	179.422	.001	179.421
408.5	69.0	.0830	231.002	231.002	231.002	.001	231.001
407.8	69.2	.0934	305.999	305.999	305.999	.001	305.998

TARE DIFF. PRESS = -3.40000E-05 + -4.44000E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0 (ACFM)**3.

TABLE 13
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

CLEAN-CONDITION - FLOW-RATE VERSUS-DIFFERENTIAL-PRESSURE, DATA ACQUIRED ON TEST SPECIMEN (S/N 027) PRIOR TO THE ADDITION OF SYNTHETIC CONTAMINANT. TEST SPECIMEN INLET PRESSURE = 415 PSIA (NOMINAL).

TEST NUMBER 10 PART 27B TEST DESCRIPTION

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW-RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.083	413.7	294.2	21.0	69.8	74.6	.0936	2.635	5.188	11.437	21.2913	302.893
29.037	413.0	294.1	21.0	69.8	65.8	.0827	2.323	4.574	10.085	15.8850	225.938
29.037	413.0	294.1	20.9	69.6	57.2	.0718	2.020	3.977	8.767	12.3921	176.257
28.992	412.4	294.0	20.9	69.6	40.0	.0603	1.694	3.336	7.354	9.3886	133.537
28.946	411.7	294.0	20.9	69.6	38.7	.0488	1.368	2.694	5.939	6.9191	98.412
28.946	411.7	294.1	20.9	69.7	29.4	.0370	1.037	2.042	4.502	4.6675	66.387
28.946	411.7	294.1	20.9	69.7	24.7	.0311	.873	1.719	3.789	3.7441	53.256
28.946	411.7	294.2	21.0	69.8	20.1	.0253	.709	1.396	3.077	3.0276	43.062
28.946	411.7	294.3	21.1	70.0	13.4	.0169	.472	.930	2.050	1.8935	26.932
28.946	411.7	294.4	21.2	70.2	13.5	.0170	.477	.939	2.069	1.9199	27.307
28.900	411.4	294.3	21.1	70.0	21.1	.0266	.745	1.466	3.233	3.2581	46.342
28.900	411.4	294.3	21.1	70.0	25.4	.0320	.896	1.763	3.888	4.0799	58.030
28.900	411.4	294.2	21.0	69.8	30.1	.0380	1.063	2.093	4.615	5.0772	72.215
28.855	410.4	294.0	20.9	69.6	39.0	.0493	1.378	2.713	5.981	7.0748	100.627
28.809	409.8	293.9	20.7	69.3	48.5	.0614	1.714	3.375	7.440	9.7668	138.917
28.764	409.1	293.8	20.6	69.2	57.1	.0724	2.017	3.971	8.755	12.6146	179.421
28.718	408.5	293.7	20.5	69.0	65.5	.0830	2.312	4.562	10.036	16.2410	231.001
28.673	407.8	293.8	20.6	69.2	73.5	.0934	2.595	5.109	11.264	21.5138	305.998
*****	*****	*****	******	******							
28.908	411.6	294.1	20.9	69.7							
.083	1.6	.1	.1	.2	DEVIATIONS						

TABLE 14

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE, DATA ACQUIRED ON TEST SPECIMEN S/N 027 PRIOR TO THE ADDITION OF SYNTHETIC CONTAMINANT. TEST SPECIMEN INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST NUMBER 10 PART 27A TEST DESCRIPTION

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS:		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.87	49.9	74.6	.91	47.6	77.7	1009.2	76.1	.0429
.78	50.4	73.5	.81	48.6	77.0	1009.2	75.3	.0390
.69	50.2	73.1	.71	48.8	76.6	1005.3	74.9	.0344
.60	50.1	72.9	.61	49.0	76.4	1005.3	74.7	.0298
.51	50.2	72.8	.50	49.2	76.3	1005.3	74.6	.0249
.41	50.4	73.0	.40	49.5	76.3	1005.3	74.7	.0208
.32	50.2	73.3	.31	49.5	76.5	1005.3	74.9	.0156
.27	50.2	73.5	.26	49.9	76.5	1005.3	75.0	.0132
.22	49.9	73.9	.21	49.3	76.8	1005.3	75.3	.0105
.14	50.6	74.6	.13	50.5	77.0	1005.3	75.8	.0069
.15	50.2	75.2	.13	49.9	77.3	1005.3	76.2	.0070
.22	50.1	75.0	.21	49.7	77.2	1001.3	76.1	.0108
.27	49.7	74.6	.26	49.2	77.1	1001.3	75.9	.0131
.32	49.7	74.2	.31	49.2	77.0	1001.3	75.5	.0155
.42	50.1	73.3	.41	49.2	76.7	1001.3	75.0	.0204
.51	50.1	72.4	.51	49.2	76.3	1001.3	74.3	.0253
.60	50.4	71.3	.60	49.3	75.6	1001.3	73.5	.0299
.69	50.1	7[illegible].4	.71	48.6	75.1	1001.3	72.7	.0344
.78	50.2	69.5	.81	48.4	74.4	997.3	71.9	.0392
.87	50.4	68.7	.91	48.2	73.6	997.3	71.1	.0441

TABLE 14
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

CLEAN CONDITION -- FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED ON TEST SPECIMEN S/N 027 PRIOR TO THE ADDITION OF SYNTHETIC CONTAMINANT. TEST SPECIMEN INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST NUMBER 1-0 PART 27A TEST DESCRIPTION

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GRASS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1009.2	76.1	.0429	91.701	92.180	91.940	=0.000	91.941
1009.2	75.3	.0390	81.146	81.435	81.291	=0.000	81.291
1005.3	74.9	.0344	68.952	69.425	69.188	=0.000	69.189
1005.3	74.7	.0298	57.559	58.363	57.961	=0.000	57.961
1005.3	74.6	.0249	46.989	46.986	46.987	=0.000	46.988
1005.3	74.7	.0200	36.039	36.094	36.066	=0.000	36.066
1005.3	74.9	.0156	26.768	26.724	26.746	=0.000	26.747
1005.3	75.0	.0132	22.249	22.136	22.193	=0.000	22.193
1005.3	75.3	.0105	17.150	17.040	17.095	=0.000	17.095
1005.3	75.8	.0069	8.981	8.984	8.982	=0.000	8.982
1005.3	76.2	.0070	10.835	10.924	10.880	=0.000	10.880
1001.3	76.1	.0118	17.672	17.727	17.699	=0.000	17.700
1001.3	75.9	.0131	21.959	22.079	22.019	=0.000	22.019
1001.3	75.5	.0155	26.884	26.954	26.919	=0.000	26.919
1001.3	75.0	.0204	36.850	37.015	36.932	=0.000	36.933
1001.3	74.3	.0253	48.090	48.250	48.170	=0.000	48.170
1001.3	73.5	.0299	58.311	58.995	58.653	=0.000	58.653
1001.3	72.7	.0344	69.827	70.373	70.100	=0.000	70.100
997.3	71.9	.0392	81.765	82.383	82.074	=0.000	82.074
997.3	71.1	.0441	95.657	95.657	95.657	=0.000	95.657

TARE DIFF. PRESS = -1.64000E-04 + -1.26930E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 14

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

CLEAN CONDITION--FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED ON TEST SPECIMEN S/N 027 PRIOR TO THE ADDITION OF SYNTHETIC CONTAMINANT. TEST SPECIMEN INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST NUMBER 10 PART 27A TEST DESCRIPTION

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS
PRESSURE		TEMPERATURE			FLOW-RATE					
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
70.956	1009.2	297.7	24.5	76.1	82.5	.0429	2.914	5.737	12.648	6.4641	91.941
70.956	1009.2	297.2	24.0	75.3	75.1	.0390	2.652	5.221	11.510	5.7153	81.291
70.677	1005.3	297.0	23.8	74.9	66.1	.0344	2.334	4.595	10.131	4.8645	69.189
70.677	1005.3	296.9	23.7	74.7	57.1	.0298	2.018	3.974	8.761	4.0751	57.961
70.677	1005.3	296.8	23.6	74.6	47.8	.0249	1.688	3.323	7.326	3.3036	46.988
70.677	1005.3	296.9	23.7	74.7	38.4	.0200	1.357	2.671	5.889	2.5357	36.066
70.677	1005.3	297.0	23.8	74.9	29.8	.0156	1.054	2.075	4.574	1.8805	26.747
70.677	1005.3	297.1	23.9	75.0	25.4	.0132	.897	1.767	3.895	1.5603	22.193
70.677	1005.3	297.2	24.1	75.3	20.1	.0105	.710	1.398	3.081	1.2019	17.095
70.677	1005.3	297.5	24.3	75.8	13.3	.0069	.470	.925	2.040	.6315	8.982
70.677	1005.3	297.7	24.6	76.2	13.3	.0070	.471	.927	2.043	.7649	10.880
70.398	1001.3	297.6	24.5	76.1	20.7	.0108	.730	1.437	3.169	1.2444	17.700
70.398	1001.3	297.5	24.4	75.9	25.0	.0131	.884	1.741	3.838	1.5481	22.019
70.398	1001.3	297.3	24.2	75.5	29.7	.0155	1.048	2.064	4.550	1.8926	26.919
70.398	1001.3	297.0	23.9	75.0	38.9	.0204	1.374	2.705	5.965	2.3966	34.093
70.398	1001.3	296.7	23.5	74.3	48.4	.0253	1.708	3.363	7.415	3.3867	48.170
70.398	1001.3	296.2	23.0	73.5	57.3	.0299	2.024	3.985	8.785	4.1237	58.653
70.398	1001.3	295.8	22.6	72.7	66.1	.0344	2.334	4.596	10.133	4.9285	70.100
70.118	997.3	295.3	22.2	71.9	75.1	.0392	2.652	5.222	11.513	5.7704	82.074
70.118	997.3	294.9	21.7	71.1	84.6	.0441	2.987	5.882	12.967	6.7253	95.687
*****	*****	*****	******	******							
70.551	1003.5	296.9	23.7	74.7							
.194	2.8	.6	.6	1.0	DEVIATIONS						

TABLE 15
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 12 PART 28D

TEST DESCRIPTION: CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED WITH FLOW IN THE FORWARD (S/N SIDE UPSTREAM) DIRECTION. TEST SPECIMEN (S/N 028) INLET PRESSURE = 415 PSIA (NOMINAL).

FLOWMETER ONE			FLOWMETER TWO			TEST SPECIMEN INLET CONDITIONS:		
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.73	49.9	75.	.75	48.3	75.8	417.5	75.4	.0971
.69	50.4	75.1	.71	48.9	75.9	416.9	75.5	.0837
.58	50.4	75.2	.60	49.3	76.0	416.9	75.6	.0709
.49	50.2	75.3	.50	49.3	75.9	416.2	75.6	.0596
.40	50.2	75.3	.40	49.5	75.7	416.2	75.5	.0484
.30	50.1	75.7	.30	49.5	76.1	416.2	75.9	.0380
.26	49.9	75.9	.25	49.3	76.6	416.2	76.3	.0334
.21	50.2	76.1	.20	49.9	77.2	416.2	76.6	.0247
.14	49.9	76.4	.13	49.7	78.0	416.2	77.2	.0164
.14	49.9	76.8	.13	49.5	79.8	416.2	78.3	.0163
.21	49.9	76.8	.21	49.3	79.9	415.6	78.4	.0252
.26	49.7	76.9	.26	49.3	79.9	415.6	78.4	.0307
.30	50.1	76.8	.30	49.5	79.7	415.6	78.2	.0363
.40	50.4	76.5	.40	49.9	79.3	415.6	77.9	.0483
.48	50.8	76.1	.49	49.9	78.9	414.9	77.5	.0592
.58	50.6	76.3	.60	49.3	78.9	414.3	77.6	.0715
.67	50.4	76.8	.70	48.9	78.7	413.7	77.7	.0822
.70	50.6	77.3	.73	48.9	78.5	413.0	77.9	.0862

TABLE 15
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 12 PART 28D TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED WITH FLOW IN THE FORWARD (S/N SIDE UPSTREAM) DIRECTION. TEST SPECIMEN (S/N 028) INLET PRESSURE = 415 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
417.5	75.4	.0871	309.946	309.946	309.946	.001	309.945
416.9	75.5	.0837	277.662	277.662	277.662	.001	277.661
416.9	75.6	.0709	203.186	203.186	203.186	.001	203.185
416.2	75.6	.0596	153.641	153.641	153.641	.000	153.640
416.2	75.5	.0484	113.686	113.686	113.686	.000	113.685
416.2	75.9	.0360	77.162	77.886	77.524	.000	77.523
416.2	76.3	.0304	62.627	63.502	63.065	.000	63.064
416.2	76.6	.0247	49.118	49.118	49.118	.000	49.118
416.2	77.2	.0164	30.611	30.611	30.611	-0.000	30.611
416.2	78.3	.0163	30.611	30.611	30.611	-0.000	30.611
415.6	78.4	.0252	50.717	50.717	50.717	.000	50.717
415.6	78.4	.0307	63.755	64.461	64.108	.000	64.107
415.6	78.2	.0363	78.414	79.484	78.949	.000	78.948
415.6	77.9	.0483	115.284	115.284	115.284	.000	115.283
414.9	77.5	.0592	152.363	152.363	152.363	.000	152.362
414.3	77.6	.0715	207.341	207.341	207.341	.001	207.340
413.7	77.7	.0822	272.868	272.868	272.868	.001	272.867
413.0	77.9	.0862	309.307	309.307	309.307	.001	309.306

TARE DIFF. PRESS = -3.40000E-05 + -4.44000E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0 (ACFM)**3.

TABLE 15
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 12 PART 28D TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED WITH FLOW IN THE FORWARD (S/N SIDE UPSTREAM) DIRECTION. TEST SPECIMEN (S/N 028) INLET PRESSURE = 415 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS									NET DIFFERENTIAL PRESS
PRESSURE		TEMPERATURE			FLOW RATE				
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.356	417.9	297.3	24.1	75.4	69.4	.0871	2.450	4.825	10.637	21.7913	309.945
29.311	416.9	297.3	24.2	75.5	66.5	.0837	2.350	4.628	10.202	19.5215	277.661
29.311	416.9	297.4	24.2	75.6	56.3	.0709	1.989	3.917	8.636	14.2853	203.185
29.265	416.2	297.4	24.2	75.6	47.3	.0596	1.670	3.289	7.251	10.8020	153.640
29.265	416.2	297.3	24.2	75.5	38.4	.0484	1.355	2.669	5.883	7.9928	113.685
29.265	416.2	297.6	24.4	75.9	28.5	.0360	1.008	1.986	4.377	5.4504	77.522
29.265	416.2	297.8	24.6	76.3	24.1	.0304	.851	1.677	3.696	4.4338	63.064
29.265	416.2	297.9	24.8	76.6	19.6	.0247	.691	1.360	2.999		
29.265	416.2	298.3	25.1	77.2	13.0	.0164	.458	.902	1.988		
29.265	416.2	298.9	25.7	78.3	12.8	.0163	.453	.893	1.968		
29.219	415.9	298.9	25.8	78.4	19.9	.0252	.702	1.382	3.047		
29.219	415.6	298.9	25.8	78.4	24.2	.0307	.855	1.683	3.711	4.5072	64.167
29.219	415.6	298.8	25.7	78.2	28.6	.0363	1.010	1.988	4.382	5.5506	78.948
29.219	415.6	298.7	25.5	77.9	38.1	.0483	1.346	2.650	5.842	8.1052	115.283
29.174	414.9	298.5	25.3	77.5	46.7	.0592	1.649	3.247	7.158	10.7121	152.362
29.128	414.3	298.5	25.3	77.6	56.2	.0715	1.986	3.910	8.620	14.5775	207.340
29.083	413.7	298.6	25.4	77.7	64.6	.0822	2.280	4.490	9.899	19.1844	272.857
29.037	413.4	298.7	25.5	77.9	67.5	.0862	2.385	4.697	10.355	21.7464	309.386
*****	*****	*****	******	******							
29.230	415.7	298.1	25.0	77.0							
.060	.8	.6	.6	1.0	DEVIATIONS						

TABLE 16

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED WITH FLOW IN THE FORWARD (S/N SIDE UPSTREAM) DIRECTION. TEST SPECIMEN (S/N 028) INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST NUMBER 12 PART 28C TEST DESCRIPTION

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.86	50.2	67.5	.91	48.0	72.9	1009.2	70.2	.0429
.78	50.0	66.6	.81	48.0	72.3	1009.2	69.4	.0385
.69	50.2	66.1	.71	48.6	71.8	1009.2	68.9	.0343
.60	50.4	65.9	.60	49.0	71.5	1009.2	68.7	.0296
.51	50.0	66.1	.51	49.0	71.6	1009.2	68.8	.0248
.41	50.2	66.4	.40	49.5	71.8	1009.2	69.1	.0199
.31	50.2	67.0	.30	49.5	71.9	1009.2	69.4	.0151
.27	49.8	67.3	.26	49.2	71.9	1009.2	69.6	.0128
.21	50.2	67.7	.20	49.7	71.7	1009.2	69.7	.0103
.14	49.4	68.7	.13	49.0	71.5	1009.2	70.1	.0067
.14	50.2	69.9	.13	49.9	72.5	1009.2	71.2	.0068
.22	50.4	69.8	.21	49.9	72.7	1009.2	71.2	.0105
.26	50.6	69.6	.25	49.9	72.9	1009.2	71.3	.0122
.31	50.4	69.4	.30	49.9	73.0	1009.2	71.2	.0154
.41	50.0	69.9	.40	49.2	73.0	1009.2	70.9	.0199
.50	50.2	68.3	.50	49.2	72.8	1009.2	70.5	.0247
.60	50.7	67.3	.60	49.3	72.1	1009.2	69.7	.0298
.69	50.4	66.6	.70	48.8	71.5	1008.3	69.1	.0342
.78	50.0	65.8	.81	48.4	70.8	1005.3	68.3	.0388
.87	50.2	65.0	.91	48.0	70.3	1005.3	67.6	.0434

TABLE 16

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED WITH FLOW IN THE FORWARD (S/N SIDE UPSTREAM) DIRECTION. TEST SPECIMEN (S/N 028) INLET PRESSURE = 1000 PSIA (NOMINAL)

TEST NUMBER 12 PART 28C TEST DESCRIPTION

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1009.2	70.2	.0429	100.608	100.608	100.608	=0.000	100.608
1009.2	69.4	.0385	86.805	88.282	87.544	=0.000	87.544
1009.2	68.9	.0343	75.995	76.905	76.450	=0.000	76.450
1009.2	68.7	.0296	64.003	64.579	64.291	=0.000	64.291
1009.2	68.8	.0248	52.054	52.569	52.312	=0.000	52.312
1009.2	69.1	.0199	39.890	40.478	40.184	=0.000	40.184
1009.2	69.4	.0151	29.215	29.574	29.395	=0.000	29.395
1009.2	69.6	.0128	24.597	24.626	24.611	=0.000	24.612
1009.2	69.7	.0103	19.202	19.225	19.214	=0.000	19.214
1009.2	70.1	.0067	11.835	11.830	11.832	=0.000	11.833
1009.2	71.2	.0068	12.067	12.174	12.120	=0.000	12.120
1009.2	71.2	.0105	19.608	19.742	19.675	=0.000	19.675
1009.2	71.3	.0129	24.829	24.971	24.900	=0.000	24.900
1009.2	71.2	.0154	29.968	30.381	30.175	=0.000	30.175
1009.2	70.9	.0199	40.267	40.825	40.546	=0.000	40.546
1009.2	70.5	.0247	51.804	52.253	52.029	=0.000	52.029
1009.2	69.7	.0298	64.868	65.211	65.040	=0.000	65.040
1005.3	69.1	.0342	76.116	76.905	76.510	=0.000	76.510
1005.3	68.3	.0388	87.967	89.230	88.599	=0.000	88.599
1005.3	67.6	.0434	102.820	102.820	102.820	=0.000	102.821

TARE DIFF. PRESS = -1.64000E-04 + -1.26930E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

DATE: 9-15-76

TABLE 16

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED WITH FLOW IN THE FORWARD (S/N SIDE UPSTREAM) DIRECTION. TEST SPECIMEN (S/N 028) INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST NUMBER 12 PART 28C TEST DESCRIPTION

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
70.956	1009.6	294.4	21.2	70.2	83.4	.0429	2.946	5.801	12.789	7.0735	100.600
70.956	1009.6	293.9	20.8	69.4	74.8	.0385	2.643	5.208	11.475	6.1548	87.560
70.956	1009.6	293.7	20.5	68.9	66.9	.0343	2.361	4.649	10.250	5.3750	76.450
70.956	1009.6	293.6	20.4	68.7	57.7	.0296	2.037	4.011	8.842	4.5201	64.291
70.956	1009.6	293.6	20.5	68.8	48.4	.0248	1.708	3.363	7.414	3.6779	52.312
70.956	1009.6	293.8	20.6	69.1	38.7	.0199	1.365	2.688	5.927	2.8252	40.184
70.956	1009.6	294.0	20.8	69.4	29.4	.0151	1.039	2.045	4.508	2.0667	29.395
70.956	1009.6	294.0	20.9	69.6	25.0	.0128	.882	1.737	3.828	1.7304	24.612
70.956	1009.6	294.1	20.9	69.7	20.1	.0103	.708	1.395	3.075	1.3509	19.214
70.956	1009.6	294.3	21.2	70.1	12.9	.0067	.456	.899	1.982	.8319	11.833
70.956	1009.6	295.0	21.8	71.2	13.1	.0068	.463	.912	2.012	.8521	12.120
70.956	1009.6	295.0	21.8	71.2	20.3	.0105	.718	1.413	3.116	1.3833	19.675
70.956	1009.6	295.0	21.8	71.3	25.0	.0129	.884	1.741	3.837	1.7607	24.900
70.956	1009.6	294.9	21.8	71.2	29.8	.0154	1.053	2.073	4.569	2.1215	30.175
70.956	1009.6	294.8	21.6	70.9	38.6	.0199	1.364	2.686	5.922	2.8807	40.545
70.956	1009.6	294.6	21.4	70.5	48.0	.0247	1.695	3.337	7.356	3.6680	52.099
70.956	1009.6	294.1	20.9	69.7	58.0	.0298	2.049	4.034	8.894	4.5728	65.040
70.677	1005.6	293.8	20.6	69.1	66.4	.0342	2.346	4.620	10.184	5.3792	76.510
70.677	1005.6	293.3	20.2	68.3	75.4	.0388	2.662	5.242	11.557	6.2291	88.599
70.677	1005.6	293.0	19.8	67.6	84.5	.0434	2.984	5.875	12.952	7.2290	102.821
*****	*****	*****	******	******							
70.914	1008.9	294.1	21.0	69.8							
.071	1.0	.5	.5	.9	DEVIATIONS						

TABLE 17
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 6 PART 3C-1 TEST DESCRIPTION CLEAN CONDITION-IMPACT/FLOW RATE VERSUS DIFFERENTIAL PRESSURE. FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA PRIOR TO CN, IMPACT CYCLES. TEST SPECIMEN (S/N 021) INLET PRESSURE 415 PSIA (NOMINAL).

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.72	50.4	78.6	.76	49.1	79.0	417.4	78.8	.0878
.67	50.4	78.9	.70	49.1	79.4	416.1	79.1	.0819
.58	50.4	79.0	.60	49.3	79.4	416.1	79.2	.0708
.49	50.4	78.8	.50	49.9	79.3	415.5	79.0	.0600
.40	50.1	78.6	.40	49.5	79.1	414.8	78.8	.0480
.31	50.1	78.9	.30	49.9	79.1	414.8	79.0	.0388
.26	50.2	78.8	.25	50.1	79.2	414.8	79.0	.0308
.21	50.2	79.4	.20	50.1	79.8	414.8	79.6	.0250
.13	50.2	80.0	.12	50.1	80.2	414.8	80.1	.0154
.13	50.1	80.5	.12	49.9	80.4	414.8	80.5	.0153
.21	50.1	79.9	.20	49.9	80.2	414.8	80.0	.0248
.26	50.2	79.2	.26	49.9	80.5	414.8	79.9	.0315
.31	49.9	78.9	.31	49.7	80.8	414.2	79.8	.0372
.40	49.9	78.8	.40	49.3	82.0	414.2	80.4	.0482
.49	50.2	79.0	.50	49.5	82.5	413.5	80.8	.0600
.58	50.1	78.9	.60	49.1	81.5	412.9	80.2	.0711
.68	50.1	79.2	.71	48.7	81.3	412.2	80.3	.0828
.70	50.4	79.7	.74	49.1	80.9	411.6	80.3	.0868

TABLE 17
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 6 PART 3C-1 TEST DESCRIPTION

CLEAN CONDITION-IMPACT/FLOW RATE VERSUS DIFFERENTIAL PRESSURE. FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA PRIOR TO GN2 IMPACT CYCLES. TEST SPECIMEN (S/N 021) INLET PRESSURE 415 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
417.4	78.8	.0878	305.617	305.617	305.617	.001	305.616
416.1	79.1	.0819	251.257	251.257	251.257	.001	251.256
416.1	79.2	.0768	186.467	186.467	186.467	.001	186.466
415.5	79.0	.0600	140.324	140.324	140.324	.000	140.323
414.8	78.8	.0480	100.503	100.503	100.503	.000	100.502
414.8	79.0	.0368	68.620	69.214	68.917	.000	68.916
414.8	79.0	.0308	54.218	54.676	54.447	.000	54.446
414.8	79.6	.0250	41.899	42.178	42.038	.000	42.037
414.8	80.1	.0154	23.544	23.523	23.533	-0.000	23.532
414.8	80.5	.0153	23.312	23.465	23.388	-0.000	23.387
414.8	80.0	.0248	41.725	41.947	41.836	.000	41.835
414.8	79.9	.0315	56.474	56.888	56.681	.000	56.680
414.2	79.8	.0372	69.994	70.794	70.394	.000	70.393
414.2	80.4	.0482	101.135	101.135	101.135	.000	101.134
413.5	80.8	.0600	140.324	140.324	140.324	.000	140.323
412.9	80.2	.0711	188.680	188.680	188.680	.001	188.678
412.2	80.3	.0828	256.945	256.945	256.945	.001	256.944
411.6	80.3	.0868	291.078	291.078	291.078	.001	291.077

TARE DIFF. PRESS = -3.40000E-05 + -4.44000E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0 (ACFM)**3

C.2

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TABLE 17
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 6 PART 3C-1 TEST DESCRIPTION CLEAN CONDITION-IMPACT/FLOW RATE VERSUS DIFFERENTIAL PRESSURE. FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA PRIOR TO GN2 IMPACT CYCLES. TEST SPECIMEN (S/N 021). INLET PRESSURE 415 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS									NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE					
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.347	417.4	299.2	26.0	78.8	70.4	.0878	2.453	4.829	10.647	21.4869	305.616
29.256	416.1	299.3	26.2	79.1	65.3	.0819	2.288	4.490	9.899	17.6650	251.256
29.256	416.1	299.4	26.2	79.2	56.0	.0708	1.969	3.877	8.547	13.1099	186.466
29.210	415.5	299.3	26.1	79.0	47.4	.0600	1.669	3.286	7.244	9.8657	140.323
29.165	414.8	299.2	26.0	78.8	37.5	.0480	1.332	2.623	5.783	7.0660	100.502
29.165	414.8	299.3	26.1	79.0	28.7	.0368	1.020	2.008	4.427	4.8453	68.916
29.165	414.8	299.3	26.1	79.0	24.0	.0308	.854	1.681	3.705	3.8279	54.446
29.165	414.8	299.6	26.4	79.6	19.4	.0250	.694	1.366	3.011	2.9555	42.037
29.165	414.8	299.9	26.7	80.1	11.8	.0154	.427	.841	1.854	1.6545	23.532
29.165	414.8	300.1	26.9	80.5	11.5	.0153	.422	.831	1.833	1.6443	23.387
29.165	414.8	299.8	26.7	80.0	19.3	.0248	.688	1.354	2.985	2.9413	41.835
29.165	414.8	299.7	26.6	79.9	24.5	.0315	.873	1.719	3.791	3.9850	56.680
29.119	414.2	299.7	26.6	79.8	29.0	.0372	1.028	2.025	4.465	4.9491	70.393
29.119	414.2	300.0	26.9	80.4	37.6	.0482	1.332	2.622	5.781	7.1104	101.134
29.073	413.5	300.3	27.1	80.8	46.9	.0600	1.654	3.256	7.179	9.8657	140.323
29.028	412.9	299.9	26.8	80.2	55.8	.0711	1.960	3.859	8.508	13.2654	188.678
28.982	412.2	300.0	26.8	80.3	65.1	.0828	2.278	4.486	9.889	18.0650	256.944
28.937 *****	411.6 *****	300.0 *****	26.8 ******	80.3 ******	68.3	.0868	2.385	4.697	10.354	20.4648	291.077
29.147	414.6	299.7	26.5	79.7							
.069	1.0	.3	.3	.6	DEVIATIONS						

TABLE 18
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 6 PART 3B TEST DESCRIPTION

CLEAN CONDITION-IMPACT/FLOW RATE VERSUS DIFFERENTIAL PRESSURE. FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA PRIOR TO GN2 IMPACT CYCLES. TEST SPECIMEN (S/N 021) INLET PRESSURE 700 PSIA (NOMINAL).

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.84	50.4	70.1	.91	48.5	74.6	711.8	72.3	.0609
.75	50.6	69.6	.81	49.1	74.2	711.8	71.9	.0546
.67	50.2	69.4	.71	48.9	73.9	711.8	71.7	.0479
.58	50.2	69.4	.60	49.3	73.8	707.8	71.6	.0417
.49	50.2	69.6	.50	49.7	73.9	707.8	71.7	.0348
.39	49.7	69.9	.40	49.3	74.1	707.8	72.0	.0276
.30	49.9	70.6	.30	49.5	74.5	707.8	72.5	.0213
.25	50.1	71.0	.25	49.9	74.7	707.8	72.9	.0179
.21	50.1	71.8	.20	49.9	75.3	707.8	73.5	.0144
.14	50.1	72.3	.14	49.9	75.7	707.8	74.0	.0099
.14	49.7	73.6	.14	49.9	76.5	711.8	75.1	.0098
.22	49.7	73.6	.21	49.7	76.5	711.8	75.1	.0149
.26	49.9	73.6	.25	49.7	76.5	711.8	75.0	.0179
.30	50.1	73.3	.31	49.9	76.4	711.8	74.9	.0214
.40	49.7	72.9	.41	49.3	76.3	711.8	74.6	.0281
.49	49.9	72.4	.50	49.3	76.0	707.8	74.2	.0347
.58	49.9	71.9	.60	48.9	75.7	707.8	73.8	.0410
.67	50.1	71.5	.71	48.9	75.2	707.8	73.4	.0481
.76	50.4	71.0	.81	48.9	74.7	707.8	72.9	.0552
.84	50.4	70.7	.91	48.5	74.2	707.8	72.5	.0612

TABLE 18
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 6 PART 3B TEST DESCRIPTION

CLEAN CONDITION-IMPACT/FLOW RATE VERSUS DIFFERENTIAL PRESSURE. FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA PRIOR TO GN2 IMPACT CYCLES. TEST SPECIMEN (S/N 021). INLET PRESSURE 700 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
711.8	72.3	.0609	148.015	148.015	148.015	-0.000	148.015
711.8	71.9	.0546	126.840	126.840	126.840	-0.000	126.840
711.8	71.7	.0479	105.665	105.665	105.665	-0.000	105.665
707.8	71.6	.0417	86.528	87.018	86.773	-0.001	86.773
707.8	71.7	.0348	67.786	68.371	68.079	-0.001	68.079
707.8	72.0	.0276	50.500	51.305	50.902	-0.001	50.902
707.8	72.5	.0213	37.097	37.226	37.162	-0.001	37.162
707.8	72.9	.0179	30.011	30.093	30.052	-0.001	30.052
707.8	73.5	.0144	22.982	23.034	23.008	-0.001	23.008
707.8	74.0	.0099	14.792	14.734	14.763	-0.001	14.763
711.8	75.1	.0098	14.618	14.734	14.676	-0.001	14.676
711.8	75.1	.0149	24.086	24.239	24.162	-0.001	24.162
711.8	75.0	.0179	29.953	30.151	30.052	-0.001	30.052
711.8	74.9	.0214	37.562	37.687	37.624	-0.001	37.624
711.8	74.6	.0281	51.878	52.569	52.224	-0.001	52.224
707.8	74.2	.0347	67.536	68.371	67.954	-0.001	67.954
707.8	73.8	.0410	85.177	86.070	85.623	-0.001	85.623
707.8	73.4	.0481	106.297	106.297	106.297	-0.000	106.297
707.8	72.9	.0552	128.420	128.420	128.420	-0.000	128.420
707.8	72.5	.0612	148.647	148.647	148.647	-0.000	148.647

TARE DIFF. PRESS = -3.60000E-04 + -3.31610E-02 (ACFM) + 6.33359E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 18
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 6 PART 3B TEST DESCRIPTION CLEAN CONDITION-IMPACT/FLOW RATE VERSUS DIFFERENTIAL PRESSURE. FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA PRIOR TO GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 021) INLET PRESSURE 700 PSIA (NOMINAL)?

TEST SPECIMEN INLET CONDITIONS

PRESSURE		TEMPERATURE			FLOW RATE					NET DIFFERENTIAL PRESS
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
50.041	711.8	295.6	22.4	72.3	84.8	.0609	2.933	5.776	12.734	10.4065	148.015
50.041	711.8	295.3	22.2	71.9	76.1	.0546	2.634	5.186	11.433	8.9177	126.840
50.041	711.8	295.2	22.0	71.7	66.5	.0479	2.313	4.554	10.039	7.4290	105.665
49.765	707.8	295.2	22.0	71.6	57.3	.0417	1.999	3.937	8.680	6.1008	86.773
49.765	707.8	295.2	22.1	71.7	47.5	.0348	1.668	3.284	7.240	4.7864	68.079
49.765	707.8	295.4	22.2	72.0	37.5	.0276	1.322	2.603	5.738	3.5788	50.902
49.765	707.8	295.7	22.5	72.5	28.8	.0213	1.021	2.010	4.431	2.6127	37.162
49.765	707.8	295.9	22.7	72.9	24.1	.0179	.857	1.688	3.721	2.1129	30.052
49.765	707.8	296.2	23.1	73.5	19.4	.0144	.690	1.359	2.997	1.6177	23.006
49.765	707.8	296.5	23.3	74.0	13.2	.0099	.474	.933	2.058	1.0379	14.763
50.041	711.8	297.1	23.9	75.1	13.0	.0098	.468	.922	2.033	1.0318	14.676
50.041	711.8	297.1	23.9	75.1	20.0	.0149	.716	1.409	3.107	1.6988	24.162
50.041	711.8	297.1	23.9	75.0	24.1	.0179	.856	1.686	3.717	2.1129	30.052
50.041	711.8	297.0	23.8	74.9	29.1	.0214	1.028	2.024	4.461	2.6459	37.624
50.041	711.8	296.8	23.7	74.6	38.2	.0281	1.347	2.651	5.845	3.4717	49.384
49.765	707.8	296.6	23.5	74.2	47.1	.0347	1.656	3.261	7.189	4.7776	67.954
49.765	707.8	296.4	23.2	73.8	56.1	.0410	1.962	3.862	8.515	6.0199	85.623
49.765	707.8	296.1	23.0	73.4	66.2	.0481	2.304	4.536	10.001	7.4734	106.297
49.765	707.8	295.9	22.7	72.9	76.1	.0552	2.645	5.208	11.481	9.0288	128.420
49.765	707.8	295.6	22.5	72.5	84.6	.0612	2.933	5.774	12.730	10.4509	148.647
*****	*****	*****	*****	*****							
49.876	709.4	296.1	22.9	73.3							
.133	1.9	.6	.6	1.1	DEVIATIONS						

TABLE 19
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 6 PART 3A TEST DESCRIPTION CLEAN CONDITION-IMPACT/FLOW RATE VERSUS DIFFERENTIAL PRESSURE. FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA PRIOR TO GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 021) INLET PRESSURE 1000 PSIA (NOMINAL).

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.83	49.3	76.5	.90	47.2	81.6	1011.9	79.0	.0412
.75	50.4	75.6	.80	48.7	80.8	1011.9	78.2	.0379
.67	50.1	76.1	.71	48.7	80.1	1011.9	77.6	.0336
.58	50.4	75.1	.60	49.3	79.9	1007.9	77.5	.0290
.48	50.4	75.1	.50	49.9	79.9	1007.9	77.5	.0244
.39	50.4	75.6	.40	49.9	80.1	1007.9	77.9	.0197
.31	50.4	76.0	.31	50.1	80.1	1007.9	78.0	.0183
.26	50.8	76.3	.26	50.4	80.2	1007.9	78.2	.0129
.21	50.8	76.5	.20	50.2	80.3	1007.9	78.4	.0104
.19	51.4	77.3	.19	50.2	80.6	1007.9	78.9	.0098
.14	47.9	77.7	.13	49.7	80.3	1007.9	79.0	.0068
.21	50.6	77.4	.21	50.1	80.1	1007.9	78.7	.0105
.25	47.1	77.0	.25	49.5	79.9	1007.9	78.4	.0124
.30	47.9	76.5	.30	49.5	79.6	1004.0	78.0	.0150
.40	47.5	75.6	.40	49.1	79.2	1004.0	77.4	.0197
.49	48.5	74.7	.50	48.7	78.6	1004.0	76.6	.0243
.58	47.9	73.7	.61	48.7	77.9	1004.0	75.8	.0291
.66	47.5	72.9	.70	48.3	77.3	1000.0	75.1	.0334
.75	50.4	72.0	.80	48.5	76.5	1000.0	74.3	.0384
.84	47.9	71.2	.91	47.8	75.7	1000.0	73.5	.0437

TABLE 19
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST DESCRIPTION: CLEAN CONDITION-IMPACT/FLOW RATE VERSUS DIFFERENTIAL PRESSURE. FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA PRIOR TO GN2 IMPACT CYCLES. TEST SPECIMEN (S/N 021) INLET PRESSURE 1000 PSIA (NOMINAL).

TEST NUMBER 6 PART 3A

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1011.7	79.0	.0412	99.009	99.009	99.009	=0.000	99.010
1011.7	78.2	.0379	87.853	88.593	88.223	=0.000	88.223
1011.7	77.6	.0336	75.014	75.967	75.489	=0.000	75.490
1007.7	77.5	.0270	61.656	62.709	62.183	=0.000	62.183
1007.7	77.5	.0244	49.391	50.083	49.737	=0.000	49.738
1007.7	77.9	.0197	38.540	38.725	38.632	=0.000	38.632
1007.7	78.0	.0153	28.387	28.486	28.437	=0.000	28.437
1007.7	78.2	.0129	22.992	23.035	23.014	=0.000	23.014
1007.7	78.4	.0104	17.597	17.594	17.596	=0.000	17.596
1007.7	78.9	.0068	10.810	10.849	10.829	=0.000	10.829
1007.7	79.0	.0098	10.694	10.792	10.743	=0.000	10.743
1007.7	78.7	.0105	17.887	17.994	17.941	=0.000	17.941
1007.7	78.4	.0144	21.890	22.003	21.947	=0.000	21.947
1004.8	78.0	.0190	27.575	27.739	27.657	=0.000	27.657
1004.8	77.4	.0197	38.369	38.609	38.488	=0.000	38.488
1004.8	76.6	.0243	48.891	49.452	49.172	=0.000	49.172
1004.8	75.8	.0291	62.407	63.025	62.716	=0.000	62.716
1000.8	75.1	.0334	73.892	74.704	74.298	=0.000	74.298
1000.8	74.3	.0384	88.342	89.224	88.783	=0.000	88.783
1000.8	73.5	.0447	103.744	103.744	103.744	=0.000	103.744

TARE DIFF. PRESS = -1.640000E-04 + -1.269300E-02 (ACFM) + 2.480700E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 19
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 6 PART 3A TEST DESCRIPTION

CLEAN CONDITION-IMPACT/FLOW RATE VERSUS DIFFERENTIAL PRESSURE. FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA PRIOR TO GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 021) INLET PRESSURE 1000 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS									NET DIFFERENTIAL PRES.	
PRESSURE		TEMPERATURE			FLOW RATE					
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN_2 KG/HR	GN_2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
71.144	1011.7	299.3	26.1	79.0	80.4	.0412	2.787	5.485	12.098	6.9611	99.010
71.144	1011.7	298.8	25.7	78.2	74.2	.0379	2.570	5.060	11.156	6.2027	88.223
71.144	1011.7	298.5	25.3	77.6	65.6	.0336	2.277	4.482	9.884	5.3074	75.490
70.869	1007.7	298.4	25.3	77.5	56.0	.0290	1.959	3.857	8.502	4.3719	62.183
70.869	1007.7	298.4	25.3	77.5	47.1	.0244	1.652	3.254	7.170	3.4969	49.738
70.869	1007.7	298.7	25.5	77.9	37.8	.0197	1.334	2.627	5.792	2.7161	38.632
70.869	1007.7	298.7	25.5	78.0	29.2	.0153	1.037	2.041	4.500	1.9993	28.437
70.869	1007.7	298.8	25.7	78.2	24.5	.0129	.872	1.715	3.785	1.6180	23.014
70.869	1007.7	298.9	25.8	78.4	19.5	.0104	.700	1.379	3.037	1.2371	17.596
70.869	1007.7	299.2	26.1	78.9	12.7	.0068	.459	.904	1.992	.7614	10.829
70.869	1007.7	299.3	26.1	79.0	12.5	.0068	.456	.897	1.982	.7553	10.743
70.869	1007.7	299.1	26.0	78.7	19.8	.0105	.707	1.391	3.067	1.2614	17.941
70.869	1007.7	299.0	25.8	78.4	23.4	.0124	.834	1.644	3.620	1.5430	21.947
70.586	1004.2	298.7	25.5	78.0	28.4	.0150	1.011	1.990	4.388	1.9445	27.657
70.586	1004.2	298.4	25.2	77.4	37.7	.0197	1.327	2.616	5.769	2.7060	38.488
70.589	1004.2	298.0	24.8	76.6	46.6	.0243	1.637	3.226	7.104	3.4571	49.172
70.586	1004.2	297.5	24.4	75.8	56.2	.0291	1.966	3.871	8.534	4.0094	57.116
70.301	1000.2	297.1	23.9	75.1	64.1	.0334	2.248	4.421	9.760	5.2237	74.398
70.301	1000.2	296.6	23.5	74.3	74.4	.0384	2.589	5.097	11.241	6.2421	88.783
70.301	1000.2	296.2	23.0	73.5	83.3	.0427	2.887	5.684	12.530	7.2740	103.444
70.258	1006.2	298.4	25.2	77.4							
.211	3.0	.7	.7	1.2	DEVIATIONS						

TABLE 20
FLOW RATE VERSUS DIFFERENTIAL-PRESSURE

DATE: 8-24-76

TEST NUMBER 6 PART 3G

TEST DESCRIPTION CLEAN CONDITION - IMPACT/FLOW RATE VERSUS DIFFERENTIAL PRESSURE. FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA AFTER 100 HIGH PRESSURE GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 021). INLET PRESSURE 415 PSIA NOMINAL.

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP. (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.85	50.2	76.4	.91	48.3	78.0	420.8	77.2	.1031
.76	50.4	76.2	.80	48.9	77.4	420.1	76.8	.0923
.67	50.1	76.1	.70	48.7	76.6	419.5	76.4	.0800
.58	49.9	76.1	.60	48.9	76.8	419.5	76.5	.0697
.49	49.9	76.3	.49	49.3	77.3	419.5	76.8	.0579
.40	50.4	76.6	.40	49.9	77.8	419.5	77.2	.0482
.30	50.4	76.8	.30	50.1	78.4	419.5	77.6	.0360
.26	49.9	77.)	.25	49.9	78.9	419.5	78.0	.0302
.21	50.1	77.3	.20	49.9	79.2	419.5	78.2	.0245
.14	50.2	77.6	.13	50.1	79.3	420.1	78.5	.0156
.13	50.1	78.3	.13	50.1	79.5	420.8	78.9	.0155
.22	49.9	78.4	.21	49.9	79.9	420.8	79.1	.0257
.25	50.2	78.5	.24	50.1	79.9	420.8	79.2	.0293
.32	50.2	78.4	.31	49.9	80.0	420.1	79.2	.0375
.40	50.2	78.2	.40	49.9	79.9	420.1	79.1	.0479
.49	50.4	78.0	.50	49.7	79.8	419.5	78.9	.0594
.58	50.1	77.8	.60	49.1	79.7	418.8	78.8	.0698
.67	50.1	77.6	.70	48.7	79.5	418.8	78.6	.0803
.76	50.2	77.3	.80	48.5	79.2	418.2	78.3	.0919
.84	50.4	77.3	.90	48.5	79.0	417.5	78.1	.1031

TABLE 20
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 8-24-76

TEST NUMBER 6 PART 3G

TEST DESCRIPTION CLEAN CONDITION - IMPACT/FLOW RATE VERSUS DIFFERENTIAL PRESSURE. FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA AFTER 100 HIGH PRESSURE GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 021) INLET PRESSURE 415 PSIA NOMINAL.

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG. GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
420.8	77.2	.1031	135.057	135.057	135.057	.002	135.056
420.1	76.8	.0923	113.250	113.250	113.250	.001	113.248
419.5	76.4	.0800	90.847	91.443	91.145	.001	91.143
419.5	76.5	.0697	74.443	75.008	74.726	.001	74.724
419.5	76.8	.0579	57.184	57.626	57.405	.000	57.404
419.5	77.2	.0482	45.213	45.395	45.304	.000	45.302
419.5	77.6	.0360	31.133	31.224	31.178	.000	31.177
419.5	78.0	.0302	24.876	24.908	24.892	.000	24.890
419.6	78.2	.0245	19.024	19.008	19.014	.000	19.013
420.1	78.5	.0156	11.144	11.172	11.158	=0.000	11.156
420.8	78.9	.0155	11.144	11.229	11.186	=0.000	11.185
420.8	79.1	.0257	20.298	20.437	20.368	.000	20.366
420.8	79.2	.0293	24.064	24.162	24.113	.000	24.112
420.1	79.2	.0375	32.755	32.891	32.823	.000	32.822
420.1	79.1	.0479	45.039	45.222	45.130	.000	45.129
419.9	78.9	.0594	59.315	59.838	59.576	.000	59.575
418.8	78.8	.0698	74.816	75.640	75.228	.001	75.227
418.8	78.6	.0803	91.334	92.391	91.862	.001	91.861
418.2	78.3	.0919	112.302	112.302	112.302	.001	112.300
417.5	78.1	.1031	134.741	134.741	134.741	.002	134.739

TARE DIFF. PRESS = =3.40000E-05 + =4.44000E-04 (ACFM) + 1.50993E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 20
FLOW-RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 8-24-76

TEST NUMBER 6 PART 3G

TEST DESCRIPTION DIFFERENTIAL PRESSURE. FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA AFTER 100 HIGH PRESSURE GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 021) INLET PRESSURE 415 PSIA NOMINAL. CLEAN CONDITION - IMPACT/FLOW RATE VERSUS NET DIFFERENTIAL PRESS.

TEST SPECIMEN INLET CONDITIONS

PRESSURE		TEMPERATURE			FLOW RATE					
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/ MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.584	420.8	298.3	25.1	77.2	83.7	.1031	2.913	5.735	12.643	9.4953	135.056
29.538	420.1	298.1	24.9	76.8	74.7	.0923	2.605	5.129	11.308	7.9622	113.248
29.493	419.5	297.8	24.7	76.4	64.4	.0800	2.257	4.444	9.798	6.4080	91.143
29.493	419.5	297.9	24.7	76.5	56.0	.0697	1.966	3.871	8.534	5.2536	74.724
29.493	419.5	298.1	24.9	76.8	46.2	.0579	1.631	3.211	7.079	4.0359	57.404
29.493	419.5	298.3	25.1	77.2	38.3	.0482	1.358	2.674	5.895	3.1851	45.302
29.493	419.5	298.5	25.3	77.6	28.4	.0360	1.014	1.997	4.402	2.1920	31.177
29.493	419.5	298.7	25.5	78.0	23.9	.0302	.850	1.674	3.691	1.7500	24.890
29.493	419.5	298.8	25.7	78.2	19.0	.0245	.687	1.353	2.983	1.3367	19.013
29.538	420.1	299.0	25.8	78.5	12.0	.0156	.440	.869	1.909	.7844	11.156
29.584	420.8	299.2	26.1	78.9	11.9	.0155	.436	.858	1.892	.7864	11.185
29.584	420.8	299.3	26.2	79.1	20.3	.0257	.724	1.426	3.144	1.4319	20.366
29.584	420.8	299.4	26.2	79.2	23.0	.0293	.825	1.624	3.580	1.6952	24.112
29.538	420.1	299.4	26.2	79.2	29.5	.0375	1.052	2.072	4.569	2.3076	32.822
29.538	420.1	299.3	26.1	79.1	38.0	.0479	1.345	2.648	5.839	3.1729	45.129
29.493	419.5	299.2	26.1	78.9	47.2	.0594	1.666	3.280	7.232	4.1885	59.575
29.447	418.8	299.2	26.0	78.8	55.8	.0698	1.957	3.852	8.493	5.2890	75.227
29.447	418.8	299.0	25.9	78.6	64.3	.0803	2.251	4.432	9.771	6.4584	91.861
29.402	418.2	298.9	25.7	78.3	73.8	.0919	2.574	5.068	11.174	7.8955	112.300
29.356	417.5	298.8	25.6	78.1	83.1	.1031	2.884	5.680	12.522	9.4731	134.739
*****	*****	*****	*****	*****							
29.504	419.6	298.8	25.6	78.1							
.046	.6	.4	.4	.8	DEVIATIONS						

TABLE 21
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 6 PART 3F

TEST DESCRIPTION: CLEAN CONDITION - IMPACT/FLOW RATE VERSUS DIFFERENTIAL PRESSURE. FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA AFTER 100 HIGH PRESSURE GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 021) INLET PRESSURE 700 PSIA NOMINAL.

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.88	49.5	68.7	.92	47.4	73.4	719.6	71.0	.0603
.78	49.5	67.6	.81	47.8	72.4	715.7	70.0	.0539
.69	49.5	67.4	.70	48.3	72.1	715.7	69.7	.0473
.60	49.5	67.5	.60	48.5	72.0	715.7	69.7	.0409
.50	49.7	67.9	.50	48.9	72.2	715.7	70.1	.0345
.41	49.7	68.4	.40	49.1	72.6	711.8	70.5	.0281
.31	49.9	69.3	.30	49.7	73.2	711.8	71.3	.0215
.26	50.1	69.9	.25	49.9	73.6	711.8	71.8	.0181
.21	49.9	70.8	.20	49.9	74.3	711.8	72.5	.0145
.14	50.4	71.6	.13	50.4	74.8	715.7	73.2	.0095
.14	49.7	72.8	.13	49.5	75.7	715.7	74.2	.0092
.22	50.1	72.7	.21	49.9	75.7	715.7	74.2	.0150
.27	50.4	72.5	.26	50.1	75.7	715.7	74.1	.0188
.32	50.2	72.3	.31	49.9	75.6	715.7	74.0	.0219
.41	50.2	71.8	.40	49.9	75.4	715.7	73.6	.0284
.50	50.1	71.3	.50	49.3	75.2	715.7	73.3	.0350
.60	49.9	70.8	.60	48.9	74.8	715.7	72.8	.0411
.69	50.1	70.2	.70	48.7	74.4	711.8	72.3	.0482
.78	50.2	69.6	.80	48.5	73.8	711.8	71.7	.0549
.87	49.9	69.2	.90	47.9	73.2	711.8	71.2	.0608

TABLE 21
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 6 PART 3F. TEST DESCRIPTION. CLEAN CONDITION - IMPACT/FLOW RATE VERSUS DIFFERENTIAL PRESSURE. FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA AFTER 100 HIGH PRESSURE GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 021) INLET PRESSURE 700 PSIA NOMINAL.

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
719.6	71.0	.0603	63.110	63.525	63.317	-0.000	63.318
715.7	70.0	.0539	54.327	54.676	54.502	-0.000	54.502
715.7	69.7	.0473	46.159	46.143	46.151	-0.001	46.151
715.7	69.7	.0409	38.269	38.339	38.304	-0.001	38.304
715.7	70.1	.0345	30.727	30.802	30.765	-0.001	30.765
711.8	70.5	.0281	23.476	23.455	23.465	-0.001	23.465
711.8	71.3	.0215	16.804	16.811	16.808	-0.001	16.808
711.8	71.8	.0181	13.556	13.6 9	13.582	-0.001	13.583
711.8	72.5	.0145	10.249	10.239	10.244	-0.001	10.244
715.7	73.2	.0095	6.304	6.303	6.303	-0.001	6.304
715.7	74.2	.0092	6.13.	6.189	6.159	-0.001	6.159
715.7	74.2	.0150	10.829	10.924	10.877	-0.001	10.877
715.7	74.1	.0188	14.310	14.409	14.360	-0.001	14.360
715.7	74.0	.0219	17.384	17.498	17.441	-0.001	17.441
715.7	73.6	.0284	23.882	23.971	23.926	-0.001	23.926
715.7	73.3	.0350	31.307	31.434	31.371	-0.001	31.371
715.7	72.8	.0411	38.617	38.800	38.709	-0.001	38.709
711.8	72.3	.0482	47.087	47.091	47.089	-0.000	47.089
711.8	71.7	.0549	55.457	55.940	55.698	-0.000	55.699
711.8	71.2	.0608	63.611	64.157	63.884	-0.000	63.884

TARE DIFF. PRESS = -3.60000E-04 + -3.31610E-02 (ACFM) + 6.33359E-01 (ACFM)**2 + 0 (ACFM)**3.

TABLE 21
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 6 PART 3F TEST DESCRIPTION: CLEAN CONDITION - IMPACT/FLOW RATE VERSUS DIFFERENTIAL PRESSURE. FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA AFTER 100 HIGH PRESSURE GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 021) INLET PRESSURE 700 PSIA NOMINAL.

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	CFM	SCFM	GN_2 KG/HR	GN_2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
50.594	719.6	294.9	21.7	71.0	83.6	.0603	2.947	5.802	12.791	4.4517	63.318
50.318	715.7	294.3	21.1	70.0	74.3	.0539	2.626	5.171	11.401	3.8319	54.502
50.318	715.7	294.1	20.9	69.7	65.2	.0473	2.305	4.538	10.006	3.2447	46.151
50.318	715.7	294.1	21.0	69.7	56.0	.0409	1.991	3.921	8.643	2.6931	38.304
50.318	715.7	294.3	21.1	70.1	47.0	.0345	1.681	3.310	7.297	2.1630	30.765
50.041	711.8	294.5	21.4	70.5	37.8	.0281	1.359	2.676	5.899	1.6498	23.465
50.041	711.8	295.0	21.8	71.3	28.8	.0215	1.039	2.045	4.508	1.1817	16.808
50.041	711.8	295.2	22.1	71.8	24.2	.0181	.873	1.718	3.789	.9549	13.583
50.041	711.8	295.7	22.5	72.5	19.4	.0145	.698	1.375	3.032	.7202	10.244
50.318	715.7	296.1	22.9	73.2	12.5	.0095	.461	.908	2.001	.4432	6.304
50.318	715.7	296.6	23.5	74.2	12.1	.0092	.447	.879	1.939	.4331	6.159
50.318	715.7	296.6	23.4	74.2	20.0	.0150	.723	1.424	3.140	.7647	10.877
50.318	715.7	296.6	23.4	74.1	25.1	.0188	.908	1.788	3.943	1.0096	14.360
50.318	715.7	296.5	23.3	74.0	29.3	.0219	1.056	2.080	4.586	1.2262	17.441
50.318	715.7	296.3	23.1	73.6	38.3	.0284	1.372	2.702	5.956	1.6822	23.926
50.318	715.7	296.1	22.9	73.3	47.5	.0350	1.692	3.332	7.347	2.2056	31.371
50.318	715.7	295.8	22.7	72.8	56.0	.0411	1.992	3.922	8.648	2.7215	38.709
50.041	711.8	295.5	22.4	72.3	65.5	.0482	2.325	4.577	10.091	3.3107	47.089
50.041	711.8	295.2	22.0	71.7	74.9	.0549	2.650	5.218	11.504	3.9160	55.699
50.041	711.8	294.9	21.8	71.2	83.2	.0608	2.937	5.784	12.752	4.4915	63.884
*****	*****	*****	******	******							
50.235	714.5	295.4	22.3	72.1							
.135	1.9	.8	.8	1.4	DEVIATIONS						

TABLE 22
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 6 PART 3E TEST DESCRIPTION: CLEAN CONDITION - IMPACT/FLOW RATE VERSUS DIFFERENTIAL PRESSURE. FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA AFTER 100 HIGH PRESSURE GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 021) INLET PRESSURE 1,000 PSIA NOMINAL.

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS:		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.84	50.1	82.0	.91	47.9	85.9	1015.9	83.9	.0420
.75	49.7	81.4	.81	47.9	85.6	1015.9	83.5	.0375
.66	49.7	81.1	.70	48.3	85.2	1015.9	83.1	.0327
.58	50.2	80.9	.61	49.3	85.0	1015.9	83.0	.0291
.49	50.1	81.1	.50	49.3	85.0	1015.9	83.0	.0243
.40	49.9	81.2	.40	49.3	84.9	1015.9	83.1	.0194
.30	49.5	81.7	.30	49.1	85.2	1015.9	83.5	.0146
.25	49.9	82.2	.25	49.5	85.4	1015.9	83.8	.0124
.21	50.1	82.6	.21	49.9	86.7	1015.9	84.2	.0102
.15	49.7	83.3	.16	49.3	86.0	1015.9	84.6	.0079
.17	49.5	84.6	.16	49.3	86.5	1015.9	85.6	.0080
.22	49.5	84.7	.22	49.1	86.8	1015.9	85.8	.0107
.26	50.1	84.8	.26	49.9	86.9	1015.9	85.8	.0127
.30	49.9	84.5	.30	49.5	86.7	1015.9	85.6	.0148
.40	50.2	83.9	.40	49.9	86.5	1015.9	85.2	.0198
.48	50.4	83.2	.50	49.9	86.2	1015.9	84.7	.0242
.58	50.2	82.2	.60	49.1	85.6	1015.9	83.9	.0289
.67	50.4	81.4	.70	49.1	85.1	1015.9	83.3	.0335
.75	50.4	80.7	.80	48.7	84.6	1015.9	82.6	.0379
.84	50.4	80.1	.91	48.3	83.9	1015.9	82.0	.0424

TABLE 22

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 6 PART 3E TEST DESCRIPTION CLEAN CONDITION - IMPACT/FLOW RATE VERSUS DIFFERENTIAL PRESSURE. FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA AFTER 100 HIGH PRESSURE GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 021) INLET PRESSURE 1,000 PSIA NOMINAL

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1015.9	83.9	.0420	45.946	45.769	45.858	-0.000	45.858
1015.9	83.5	.0375	39.689	39.807	39.748	-0.000	39.748
1015.9	83.1	.0327	33.315	33.367	33.341	-0.000	33.341
1015.9	83.0	.0291	28.622	28.602	28.612	-0.000	28.613
1015.9	83.0	.0243	22.770	22.758	22.764	-0.000	22.764
1015.9	83.1	.0194	17.324	17.324	17.324	-0.000	17.324
1015.9	83.5	.0146	12.167	12.128	12.148	-0.000	12.148
1015.9	83.8	.0124	9.908	9.904	9.906	-0.000	9.906
1015.9	84.2	.0102	7.880	7.852	7.866	-0.000	7.866
1015.9	84.6	.0079	5.852	5.859	5.855	-0.000	5.856
1015.9	85.6	.0080	5.852	5.859	5.855	-0.000	5.856
1015.9	85.8	.0107	8.343	8.365	8.354	-0.000	8.354
1015.9	85.8	.0127	10.197	10.246	10.222	-0.000	10.222
1015.9	85.6	.0148	12.341	12.413	12.377	-0.000	12.377
1015.9	85.2	.0198	17.614	17.667	17.640	-0.000	17.640
1015.9	84.7	.0242	22.712	22.758	22.735	-0.000	22.735
1015.9	83.9	.0289	28.564	28.660	28.612	-0.000	28.612
1015.9	83.3	.0335	34.532	34.631	34.581	-0.000	34.582
1015.9	82.6	.0379	40.326	40.440	40.383	-0.000	40.384
1015.9	82.0	.0424	46.873	47.032	46.953	-0.000	46.953

TARE DIFF. PRESS = -1.64000E-04 + -1.26930E-02 (ACFM) + 2.48070E-01 (ACFM)**2. + 0 (ACFM)**3.

TABLE 22
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 6 PART 3E TEST DESCRIPTION: CLEAN CONDITION - IMPACT/FLOW RATE VERSUS DIFFERENTIAL PRESSURE. FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA AFTER 100 HIGH PRESSURE GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 021) INLET PRESSURE 1,000 PSIA NOMINAL.

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS
PRESSURE		TEMPERATURE			FLOW RATE					
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
71.423	1015.9	302.0	28.9	83.9	81.6	.0420	2.827	5.567	12.272	3.2242	45.858
71.423	1015.9	301.8	28.6	83.5	72.9	.0375	2.530	4.981	10.982	2.7946	39.746
71.423	1015.9	301.6	28.4	83.1	63.2	.0327	2.202	4.336	9.556	2.3441	33.341
71.423	1015.9	301.5	28.3	83.0	56.2	.0291	1.962	3.864	8.518	2.0117	28.613
71.423	1015.9	301.5	28.3	83.0	46.6	.0243	1.637	3.223	7.106	1.6005	22.764
71.423	1015.9	301.5	28.4	83.1	37.1	.0194	1.310	2.580	5.689	1.2180	17.324
71.423	1015.9	301.7	28.6	83.5	27.7	.0146	.986	1.942	4.282	.8541	12.148
71.423	1015.9	301.9	28.8	83.8	23.4	.0124	.835	1.644	3.624	.6965	9.906
71.423	1015.9	302.1	29.0	84.2	19.3	.0102	.688	1.354	2.985	.5530	7.866
71.423	1015.9	302.4	29.2	84.6	14.9	.0079	.533	1.049	2.313	.4117	5.856
71.423	1015.9	302.9	29.8	86.6	14.9	.0080	.534	1.051	2.317	.4117	5.856
71.423	1015.9	303.0	29.9	85.8	20.2	.0107	.721	1.419	3.129	.5674	8.356
71.423	1015.9	303.1	29.9	85.8	24.0	.0127	.850	1.674	3.691	.7187	10.222
71.423	1015.9	303.0	29.8	85.6	28.0	.0148	.996	1.960	4.322	.8702	12.377
71.423	1015.9	302.7	29.6	85.2	37.7	.0198	1.329	2.617	5.770	1.2402	17.640
71.423	1015.9	302.4	29.3	84.7	46.3	.0242	1.628	3.205	7.066	1.5985	22.735
71.423	1015.9	302.0	28.8	83.9	55.3	.0289	1.943	3.827	8.436	2.0116	28.612
71.423	1015.9	301.6	28.5	83.3	64.9	.0335	2.262	4.453	9.818	2.4313	34.582
71.423	1015.9	301.3	28.1	82.6	73.4	.0379	2.556	5.033	11.095	2.8393	40.384
71.423	1015.9	300.9	27.8	82.0	82.5	.0424	2.868	5.646	12.448	3.3011	46.959
*****	*****	*****	******	******							
71.423	1015.9	302.1	28.9	84.0							
0	.0	.5	.5	.9	DEVIATIONS						

TABLE 23
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 10 PART 27C TEST DESCRIPTION CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED AFTER THE ADDITION OF 7.9 MG OF SYNTHETIC CONTAMINANT AND PRIOR TO THE GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 027) INLET PRESSURE = 415 PSIA (NOMINAL).

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.65	50.5	69.9	.66	49.2	70.8	414.3	70.3	.0784
.60	50.5	69.9	.61	49.2	70.9	413.7	70.4	.0729
.50	50.5	69.8	.50	49.5	70.9	413.7	70.3	.0607
.41	50.1	69.8	.40	49.3	70.9	413.7	70.3	.0491
.31	50.5	69.9	.30	49.9	71.2	413.7	70.5	.0371
.26	50.3	69.9	.25	49.9	71.2	413.7	70.5	.0307
.21	50.1	70.0	.20	49.9	71.2	413.7	70.6	.0250
.14	51.1	70.2	.13	50.5	71.4	413.7	70.8	.0165
.14	50.3	70.4	.13	49.9	71.7	413.7	71.0	.0162
.22	49.7	70.4	.21	49.3	71.7	413.7	71.0	.0258
.27	49.9	70.3	.26	49.5	71.6	413.7	70.9	.0315
.31	49.9	70.1	.31	49.3	71.6	413.7	70.9	.0374
.41	50.1	69.9	.40	49.3	71.4	413.0	70.6	.0488
.50	50.1	69.7	.51	49.0	71.3	413.0	70.5	.0607
.59	50.3	69.7	.60	49.0	71.1	412.4	70.4	.0717
.62	50.5	69.9	.65	49.2	70.9	411.7	70.4	.0769

TABLE 23

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 10 PART 27C TEST DESCRIPTION CONTAMINATED CONDITION -- FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED AFTER THE ADDITION OF 7.9 MG OF SYNTHETIC CONTAMINANT AND PRIOR TO THE GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 027) INLET PRESSURE = 415 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
414.3	70.3	.0784	304.839	304.839	304.839	.001	304.838
413.7	70.4	.0729	255.157	255.157	255.157	.001	255.157
413.7	70.3	.0607	181.427	181.427	181.427	.000	181.426
413.7	70.3	.0491	132.378	132.378	132.378	.000	132.377
413.7	70.5	.0371	91.144	92.190	91.667	.000	91.666
413.7	70.5	.0307	71.900	72.571	72.236	.000	72.235
413.7	70.6	.0250	55.648	56.432	56.040	.000	56.039
413.7	70.8	.0165	34.827	35.082	34.954	-0.000	34.954
413.7	71.0	.0162	34.189	34.333	34.261	-0.000	34.260
413.7	71.0	.0258	58.030	58.964	58.497	.000	58.496
413.7	70.9	.0315	74.384	75.419	74.901	.000	74.901
413.7	70.9	.0374	92.582	93.772	93.177	.000	93.176
413.9	70.6	.0488	133.960	133.960	133.960	.000	133.959
413.9	70.5	.0607	186.173	186.173	186.173	.000	186.172
412.9	70.4	.0717	253.259	253.259	253.259	.001	253.258
411.7	70.4	.0769	303.257	303.257	303.257	.001	303.256

TARE DIFF. PRESS = -3.40000E-05 + -4.44000E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 23

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 10 PART 27C TEST DESCRIPTION CONTAMINATED CONDITION -- FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED AFTER THE ADDITION OF 7.9 MG OF SYNTHETIC CONTAMINANT AND PRIOR TO THE GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 027) INLET PRESSURE = 415 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS									NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE					
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ.CM DIFFERENTIAL	PSID
29.128	414.3	294.5	21.3	70.3	62.6	.0784	2.210	4.351	9.592	21.4322	304.838
29.083	413.7	294.5	21.3	70.4	58.1	.0729	2.051	4.038	8.902	17.9393	255.157
29.083	413.7	294.5	21.3	70.3	48.3	.0607	1.706	3.359	7.406	12.7555	181.426
29.083	413.7	294.5	21.3	70.3	39.1	.0491	1.381	2.719	5.995	9.3070	132.377
29.083	413.7	294.6	21.4	70.5	29.5	.0371	1.043	2.054	4.528	6.4448	91.646
29.083	413.7	294.6	21.4	70.5	24.4	.0307	.862	1.698	3.743	5.0786	72.225
29.083	413.7	294.6	21.4	70.6	19.9	.0250	.702	1.382	3.047	3.9399	56.039
29.083	413.7	294.7	21.6	70.8	13.2	.0165	.465	.915	2.017	2.4575	34.955
29.083	413.7	294.8	21.7	71.0	12.9	.0162	.455	.897	1.977	2.4087	34.260
29.083	413.7	294.8	21.7	71.0	20.5	.0258	.723	1.424	3.140	4.1127	58.496
29.083	413.7	294.8	21.6	70.9	25.0	.0315	.884	1.740	3.836	5.2660	74.901
29.083	413.7	294.8	21.6	70.9	29.7	.0374	1.051	2.069	4.561	6.5509	93.175
29.037	413.0	294.6	21.5	70.6	38.8	.0488	1.369	2.695	5.942	9.4183	133.959
29.037	413.0	294.6	21.4	70.5	48.3	.0607	1.704	3.355	7.397	13.0892	186.172
28.992	412.4	294.5	21.3	70.4	56.9	.0717	2.011	3.954	8.729	17.8088	253.258
28.946	411.7	294.5	21.3	70.4	60.9	.0769	2.151	4.236	9.338	21.3210	303.256
*****	*****	*****	******	******							
29.066	413.4	294.6	21.4	70.6							
.031	.4	.1	.1	.2	DEVIATIONS						

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TABLE 24

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 10 PART 270 TEST DESCRIPTION

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED AFTER THE ADDITION OF 7.9 MG OF SYNTHETIC CONTAMINANT AND PRIOR TO THE GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 027) INLET PRESSURE = 1000 PSIA (NOMINAL).

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS:		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.86	50.1	65.6	.90	47.8	70.2	1013.2	67.9	.0426
.78	50.2	64.0	.81	48.4	69.2	1013.2	66.6	.0387
.69	50.4	63.5	.70	49.0	68.7	1013.2	66.1	.0341
.60	49.9	63.2	.60	48.8	68.4	1013.2	65.8	.0293
.51	50.4	63.1	.50	49.5	68.3	1013.2	65.7	.0249
.41	49.9	63.3	.40	49.2	68.5	1013.2	65.9	.0199
.31	50.4	63.8	.30	49.9	68.7	1013.2	66.2	.0152
.26	50.2	64.2	.25	49.9	68.9	1013.2	66.6	.0127
.22	50.1	64.7	.21	49.9	69.2	1017.2	66.9	.0104
.15	50.2	65.4	.13	49.9	69.5	1017.2	67.4	.0070
.15	50.4	66.6	.13	50.1	70.2	1017.2	68.4	.0070
.22	49.9	66.5	.21	49.5	70.1	1017.2	68.3	.0105
.27	49.7	66.3	.26	49.3	70.0	1017.2	68.2	.0130
.32	50.1	65.9	.31	49.5	69.9	1017.2	67.9	.0154
.42	49.9	65.1	.41	49.2	69.5	1017.2	67.3	.0201
.50	50.4	63.8	.50	49.5	68.7	1017.2	66.3	.0247
.60	50.1	63.0	.60	49.0	68.2	1017.2	65.6	.0293
.69	50.2	62.1	.70	48.8	67.5	1017.2	64.8	.0338
.78	49.7	60.9	.81	48.0	66.3	1013.2	63.6	.0381
.87	50.1	60.2	.91	48.0	65.4	1013.2	62.8	.0430

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TABLE 24
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 10 PART 270 TEST DESCRIPTION CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE, DATA ACQUIRED AFTER THE ADDITION OF 7.9 MG OF SYNTHETIC CONTAMINANT AND PRIOR TO THE GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 027) INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1013.2	67.9	.0426	113.603	113.603	113.603	=0.000	113.603
1013.2	66.6	.0387	100.628	100.628	100.628	=0.000	100.628
1013.2	66.1	.0341	76.592	87.021	81.807	=0.000	81.807
1013.2	65.8	.0293	62.171	72.149	67.160	=0.000	67.160
1013.2	65.7	.0249	49.674	59.807	54.741	=0.000	54.741
1013.2	65.9	.0199	35.624	45.568	40.596	=0.000	40.596
1013.2	66.2	.0152	33.547	33.623	33.585	=0.000	33.585
1013.2	66.6	.0127	27.464	27.467	27.465	=0.000	27.465
1017.2	66.9	.0104	21.959	22.011	21.985	=0.000	21.985
1017.2	67.4	.0070	13.964	13.989	13.976	=0.000	13.976
1017.2	68.4	.0070	13.906	13.989	13.947	=0.000	13.947
1017.2	68.3	.0105	22.017	22.183	22.100	=0.000	22.100
1017.2	68.2	.0130	28.101	28.329	28.215	=0.000	28.215
1017.2	67.9	.0154	38.133	34.199	36.166	=0.000	36.166
1017.2	67.3	.0201	50.552	46.517	48.534	=0.000	48.534
1017.2	66.3	.0247	63.166	59.491	61.328	=0.000	61.329
1017.2	65.6	.0293	76.105	72.465	74.285	=0.000	74.285
1017.2	64.8	.0338	89.397	86.389	87.893	=0.000	87.893
1013.2	63.6	.0381	99.996	99.996	99.996	=0.000	99.996
1013.2	62.8	.0430	116.451	116.451	116.451	=0.000	116.451

TARE DIFF. PRESS = -1.64000E-04 + -1.26930E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 24

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 10 PART 270 TEST DESCRIPTION CONTAMINATED CONDITION -- FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED AFTER THE ADDITION OF 7.9 MG OF SYNTHETIC CONTAMINANT AND PRIOR TO THE GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 027) INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS.	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/ MIN	SCFM	SCEM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
71.235	1013.6	293.1	19.9	67.9	83.5	.0426	2.950	5.608	12.804	7.9871	113.603
71.235	1013.6	292.4	19.2	66.6	76.0	.0387	2.685	5.280	11.653	7.0749	100.629
71.235	1013.6	292.1	19.0	66.1	67.1	.0341	2.370	4.666	10.288	5.7516	81.807
71.235	1013.6	291.9	18.8	65.8	57.6	.0293	2.033	4.004	8.826	4.7218	67.160
71.235	1013.6	291.9	18.7	65.7	49.1	.0249	1.733	3.412	7.522	3.8487	54.741
71.235	1013.6	292.0	18.8	65.9	39.0	.0199	1.379	2.715	5.986	2.8542	40.596
71.235	1013.6	292.2	19.0	66.2	29.8	.0152	1.053	2.073	4.569	2.3613	33.585
71.235	1013.6	292.4	19.2	66.6	25.0	.0127	.882	1.736	3.828	1.9310	27.465
71.514	1017.6	292.6	19.4	66.9	20.6	.0104	.726	1.429	3.151	1.5467	21.985
71.514	1017.6	292.9	19.7	67.4	13.7	.0070	.484	.953	2.101	.9826	13.976
71.514	1017.6	293.4	20.2	68.4	13.7	.0070	.485	.955	2.105	.9806	13.947
71.514	1017.6	293.3	20.2	68.3	20.7	.0105	.731	1.440	3.175	1.5538	22.100
71.514	1017.6	293.2	20.1	68.2	25.6	.0130	.903	1.779	3.921	1.9837	28.215
71.514	1017.6	293.1	19.9	67.9	30.3	.0154	1.070	2.107	4.646	2.5427	36.166
71.514	1017.6	292.8	19.6	67.3	39.6	.0201	1.398	2.753	6.070	3.4123	48.535
71.514	1017.6	292.2	19.1	66.3	48.8	.0247	1.722	3.391	7.475	4.3118	61.329
71.514	1017.6	291.8	18.7	65.6	57.8	.0293	2.042	4.020	8.863	5.2228	74.285
71.514	1017.6	291.4	18.2	64.8	66.9	.0339	2.364	4.655	10.262	6.1795	87.893
71.235	1013.6	290.7	17.6	63.6	75.3	.0381	2.659	5.236	11.543	7.0304	99.996
71.235	1013.6	290.3	17.1	62.8	85.1	.0430	3.005	5.917	13.044	8.1873	116.451
*****	*****	*****	******	******							
71.375	1015.2	292.3	19.1	66.4							
.140	2.0	.6	.6	1.1	DEVIATIONS						

TABLE 25
FLOW-RATE VERSUS-DIFFERENTIAL-PRESSURE

DATE: 9-14-76

TEST NUMBER 10 PART 27F

TEST DESCRIPTION: CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED AFTER THE ADDITION OF 7.9 MG OF SYNTHETIC CONTAMINANT AND AFTER 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN2 IMPACT CYCLES. TEST SPECIMEN (S/N 027)

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSI_A)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSI_A)	TEMP (DEG. F)	PRESSURE (PSI_A)	AVG TEMP (DEG. F)	AVG. FLOW RATE (ACFM)
.85	49.9	63.6	.90	47.6	68.8	1011.9	66.2	.0421
.76	50.2	62.9	.81	48.3	68.1	1011.9	65.5	.0381
.66	50.2	62.5	.70	48.7	67.9	1011.9	65.2	.0333
.57	50.8	62.5	.59	49.5	67.8	1007.9	65.1	.0289
.49	50.2	62.8	.50	49.3	67.9	1007.9	65.4	.0245
.40	50.6	63.4	.40	49.9	68.2	1007.9	65.8	.0200
.30	50.2	63.4	.30	49.7	68.3	1007.9	65.8	.0149
.26	50.2	64.1	.25	49.7	69.7	1007.9	66.9	.0127
.21	50.2	65.4	.20	49.9	70.0	1007.9	67.7	.0103
.14	49.9	66.4	.13	49.5	69.7	1007.9	68.1	.0066
.14	49.9	66.8	.13	49.5	71.9	1011.9	69.4	.0066
.21	49.9	66.6	.20	49.5	72.3	1011.9	69.4	.0100
.26	50.1	66.3	.26	49.5	71.6	1011.9	69.0	.0129
.30	50.1	64.8	.30	49.7	70.2	1007.9	68.5	.0149
.40	49.7	66.6	.41	48.9	70.1	1007.9	68.4	.0197
.49	49.9	65.6	.50	48.9	69.6	1007.9	67.6	.0242
.57	50.1	64.3	.60	48.9	69.5	1007.9	66.9	.0287
.67	49.9	63.1	.71	48.3	69.4	1007.9	66.2	.0337
.75	49.9	62.3	.81	47.9	69.6	1007.9	66.0	.0379
.84	50.1	62.3	.91	47.8	68.6	1007.9	65.4	.0425

TABLE 25

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST UNIT ID PART 27F

TEST DESCRIPTION CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED AFTER THE ADDITION OF 7.9 MG OF SYNTHETIC CONTAMINANT AND AFTER 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN S/N 027) INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS
****

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (CFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1011.9	66.2	.421	292.659	292.659	292.659	=0.000	292.659
1011.9	65.5	.381	247.464	247.464	247.464	=0.000	247.464
1011.9	65.2	.333	197.529	197.529	197.529	=0.000	197.529
1007.9	65.1	.289	156.127	156.127	156.127	=0.000	156.127
1007.9	65.4	.245	120.414	120.414	120.414	=0.000	120.414
1007.9	65.8	.202	86.071	88.177	87.424	=0.000	87.424
1007.9	65.8	.149	56.617	57.521	57.069	=0.000	57.069
1007.9	66.9	.127	44.518	45.185	44.851	=0.000	44.851
1007.9	67.7	.103	32.608	33.335	32.971	=0.000	32.972
1007.9	68.1	.0656	18.058	18.112	18.085	=0.000	18.085
1011.9	69.4	.0656	17.942	18.112	18.027	=0.000	18.027
1011.9	69.4	.0100	31.981	32.702	32.341	=0.000	32.342
1011.9	69.6	.0129	46.261	47.091	46.675	=0.000	46.676
1007.9	68.5	.0140	56.493	57.204	56.849	=0.000	56.849
1007.9	68.4	.0197	85.774	87.545	86.642	=0.000	86.643
1007.9	67.6	.0242	120.414	120.414	120.414	=0.000	120.414
1007.9	66.9	.027	156.759	156.759	156.759	=0.000	156.759
1007.9	66.2	.0337	202.270	202.270	202.270	=0.000	202.270
1007.9	66.1	.0379	246.832	246.832	246.832	=0.000	246.832
1007.9	65.4	.0425	304.036	304.036	304.036	=0.000	304.037

TARE DIFF. PRESS = -1.64000E-04 + -1.26934E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 25
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

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TEST NUMBER 10 PART 27F

TEST DESCRIPTION: CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED AFTER THE ADDITION OF 7.9 MG OF SYNTHETIC CONTAMINANT AND AFTER 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 027) INLET PRESSURE = NET DIFFERENTIAL PRESS 1000 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE		TEMPERATURE			FLOW RATE					
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	CFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
71.144	1011.9	292.1	19.0	66.2	2.7	.0421	2.920	5.750	12.677	20.5760	292.659
71.144	1011.9	291.8	18.6	65.5	74.9	.381	2.645	5.208	11.482	17.3985	247.464
71.144	1011.9	291.6	18.5	65.2	64.4	.333	2.311	4.551	10.032	13.8877	197.529
70.865	1007.9	291.5	18.4	65.1	56.7	.289	2.002	3.942	8.690	10.9768	156.127
70.865	1007.9	291.7	18.5	65.4	47.9	.248	1.691	3.330	7.342	8.4659	120.414
70.865	1007.9	291.9	18.8	65.8	39.1	.0200	1.379	2.716	5.987	6.1465	87.424
70.865	1007.9	292.1	18.8	65.8	29.2	.0149	1.031	2.031	4.478	4.0124	57.069
70.865	1007.9	292.5	19.4	66.9	24.7	.0127	.873	1.720	3.791	3.1534	44.851
70.865	1007.9	293.1	19.8	67.7	20.1	.0103	.708	1.395	3.075	2.3181	32.972
70.865	1007.9	293.2	20.1	68.1	12.8	.0066	.454	.893	1.969	1.2715	18.085
71.144	1011.9	293.9	20.8	69.4	12.8	.0066	.452	.891	1.964	1.2674	18.027
71.144	1011.9	294.0	21.0	69.8	19.6	.0101	.692	1.363	3.004	2.2738	32.342
71.144	1011.9	293.7	20.5	69.0	25.3	.0129	.892	1.757	3.874	3.2816	46.676
70.865	1007.9	293.5	20.3	68.6	28.9	.0148	1.021	2.011	4.434	3.9969	56.849
70.865	1007.9	293.4	20.2	68.4	38.4	.0197	1.355	2.668	5.883	6.0916	86.643
70.865	1007.9	292.9	19.8	67.6	47.2	.0242	1.669	3.285	7.243	8.4659	120.414
70.865	1007.9	292.6	19.4	66.9	56.1	.0287	1.978	3.894	8.585	11.0213	156.759
70.865	1007.9	292.2	19.	66.2	65.8	.0337	2.324	4.576	10.089	14.2210	202.270
70.865	1007.9	292.0	18.9	66.0	74.1	.0379	2.617	5.152	11.358	17.3540	246.832
70.865	1007.9	291.7	18.6	65.4	83.3	.0426	2.942	5.793	12.771	21.3759	304.037
*****	*****	*****	******	******							
70.949	1009.1	292.6	19.4	66.9							
.117	1.7	.7	.7	1.3	DEVIATIONS						

TABLE 26.

FLOW RATE VERSUS DIFFERENTIAL PRESSURE CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED AFTER THE ADDITION OF 7.9 MG OF SYNTHETIC CONTAMINANT AND AFTER 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 027) INLET PRESSURE = 415 PSIA (NOMINAL).

TEST NUMBER 10 PART 276 TEST DESCRIPTION

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.38	49.9	73.7	.37	49.2	75.3	413.8	74.5	.0449
.35	50.4	73.8	.35	49.9	75.5	413.1	74.6	.0428
.30	50.6	74.3	.30	50.1	75.7	413.1	75.0	.0367
.26	50.2	74.2	.26	49.9	75.3	413.1	75.0	.0315
.21	50.4	74.4	.21	50.1	76.0	413.1	75.2	.0254
.14	50.2	75.5	.13	49.9	76.3	413.1	75.9	.0167
.14	50.4	75.9	.13	50.1	76.6	413.1	76.3	.0167
.21	49.7	75.7	.21	49.3	76.6	413.1	76.2	.0250
.26	49.7	75.8	.25	49.3	76.8	412.5	76.3	.0305
.31	49.9	75.7	.31	49.3	76.8	412.5	76.3	.0373
.35	49.9	75.8	.35	49.2	76.9	411.8	76.3	.0425
.37	49.9	75.9	.37	49.2	77.	411.8	76.4	.0441

TABLE 26

FLOW RATE VERSUS DIFFERENTIAL PRESSURE CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED AFTER THE ADDITION OF 7.9 MG OF SYNTHETIC CONTAMINANT AND AFTER 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N-027) INLET PRESSURE = 415 PSIA (NOMINAL).

TEST NUMBER 10 PART 276 TEST DESCRIPTION

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
413.8	74.5	.0449	303.931	303.931	303.931	.000	303.931
413.1	74.6	.0428	259.685	259.685	259.685	.000	259.684
413.1	75.0	.0367	180.357	180.357	180.357	.000	180.357
413.1	75.0	.0315	133.898	133.898	133.898	.000	133.898
413.1	75.2	.0254	91.487	93.128	92.308	.000	92.308
413.1	75.9	.0167	49.137	49.830	49.483	.000	49.483
413.1	76.3	.0167	48.512	49.198	48.855	.000	48.855
413.1	76.2	.0250	89.204	90.916	90.060	.000	90.060
412.9	76.3	.0305	128.841	128.841	128.841	.000	128.841
412.9	76.3	.0373	190.154	190.154	190.154	.000	190.154
411.8	76.3	.0425	257.788	257.788	257.788	.000	257.788
411.8	76.4	.0441	291.921	291.921	291.921	.000	291.921

TARE DIFF. PRESS = -3.40000E-05 + -4.44000E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 26

FLOW RATE VERSUS DIFFERENTIAL PRESSURE CONTAMINATED CONDITION -- FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED AFTER THE ADDITION OF 7.9 MG OF SYNTHETIC CONTAMINANT AND AFTER 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN

TEST NUMBER 10 PART 270 TEST DESCRIPTION (S/N 027) INLET PRESSURE = 415 (NOMINAL).

TEST SPECIMEN INLET CONDITIONS									NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE					
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.092	413.8	296.8	23.6	74.5	35.4	.449	1.252	2.465	5.434	21.3685	303.931
29.046	413.1	296.8	23.7	74.6	33.8	.428	1.194	2.351	5.182	18.2576	259.684
29.046	413.1	297.0	23.9	75.0	28.9	.0367	1.022	2.013	4.437	12.6803	180.357
29.046	413.1	297.0	23.9	75.0	24.8	.0315	.877	1.726	3.805	9.4140	133.898
29.046	413.1	297.1	24.0	75.2	24.0	.0254	.707	1.393	3.071	6.4899	92.308
29.046	413.1	297.6	24.4	75.9	13.2	.0167	.465	.915	2.018	3.4790	49.483
29.046	413.1	297.8	24.6	76.3	13.1	.0167	.463	.913	2.012	3.4348	48.855
29.046	413.1	297.7	24.5	76.2	19.7	.0250	.695	1.369	3.019	6.3318	90.060
29.001	412.5	297.8	24.6	76.3	23.9	.0305	.845	1.663	3.667	9.0584	128.841
29.001	412.5	297.8	24.6	76.3	29.3	.0373	1.035	2.039	4.494	13.3692	190.154
28.955	411.8	297.8	24.6	76.3	33.3	.425	1.177	2.317	5.109	18.1243	257.788
28.955	411.8	297.8	24.7	76.4	34.6	.441	1.222	2.406	5.305	20.5241	291.921
*****	*****	*****	******	******							
29.028	412.9	297.4	24.3	75.7							
.033	.5	.4	.4	.7	DEVIATIONS						

TABLE 27

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11 PART 27J TEST DESCRIPTION

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED AFTER THE ADDITION OF 15.8 MG OF SYNTHETIC CONTAMINANT AND AFTER 20 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 027) INLET PRESSURE = 1000 PSIA (NOMINAL).

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.20	50.4	72.1	.19	50.1	74.1	1 15.9	73.1	.0097
.18	50.4	72.8	.18	50.2	74.1	1 15.9	73.0	.0088
.16	50.6	72.4	.15	50.2	74.3	1 15.9	73.1	.0078
.14	50.4	72.1	.13	50.1	74.4	1 15.9	73.3	.0068
.12	50.2	72.4	.11	49.9	74.5	1 15.9	73.5	.0057
.12	50.4	72.5	.11	50.2	73.5	1 15.9	73.0	.0058
.14	49.7	72.	.13	49.5	73.5	1 15.9	72.8	.0067
.16	50.2	72.	.15	49.9	75.1	1 15.9	73.5	.0078
.18	49.7	71.8	.18	49.3	74.8	1 15.9	73.3	.0088
.19	50.1	71.8	.19	49.7	73.3	1 11.9	72.5	.0094

TABLE 27
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 10 PART 271

TEST DESCRIPTION

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED AFTER THE ADDITION OF 15.8 MG OF SYNTHETIC CONTAMINANT AND AFTER 20 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 027) INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1015.9	73.1	.0097	302.772	302.772	302.772	=0.000	302.772
1015.9	73.0	.0088	260.422	260.422	260.422	=0.000	260.422
1015.9	73.1	.0078	214.595	214.595	214.595	=0.000	214.596
1015.9	73.3	.0068	173.825	173.825	173.825	=0.000	173.826
1015.9	73.5	.0057	134.004	134.004	134.004	=0.000	134.004
1015.9	73.0	.0058	134.636	134.636	134.636	=0.000	134.636
1015.9	72.8	.0067	168.769	168.769	168.769	=0.000	168.769
1015.9	73.5	.0078	210.171	210.171	210.171	=0.000	210.171
1015.9	73.3	.0088	259.474	259.474	259.474	=0.000	259.474
1011.9	72.5	.0094	290.446	290.446	290.446	=0.000	290.447

TARE DIFF. PRESS = -1.64000E-04 + -1.28930E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 27

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED AFTER THE ADDITION OF 15.8 MG OF SYNTHETIC CONTAMINANT AND AFTER 20 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 027) INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST NUMBER 10 PART 271 TEST DESCRIPTION

TEST SPECIMEN INLET CONDITIONS | NET DIFFERENTIAL PRESS

PRESSURE		TEMPERATURE			FLOW RATE					
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	CFM	SCFM	GN_2 KG/HR	GN_2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
71.423	1015.9	296.	22.8	73.1	18.9	.0097	.666	1.311	2.891	21.2870	302.772
71.423	1015.9	296.2	22.8	73.	17.2	.0088	.607	1.194	2.633	18.3095	260.422
71.423	1015.9	296.2	22.9	73.1	15.1	.0078	.535	1.053	2.321	15.0876	214.596
71.423	1015.9	296.1	22.9	73.3	13.3	.0068	.469	.923	2.034	12.2212	173.826
71.423	1015.9	296.2	23.	73.5	11.2	.0057	.394	.775	1.709	9.4214	134.004
71.423	1015.9	295.9	22.8	73.	11.2	.0058	.396	.780	1.720	9.4658	134.636
71.423	1015.9	295.8	22.6	72.3	13.1	.0067	.463	.911	2.008	11.8656	168.769
71.423	1015.9	296.2	23.1	73.5	15.1	.0078	.533	1.050	2.314	14.7765	210.171
71.423	1015.9	296.1	22.9	73.3	17.0	.0088	.602	1.185	2.611	18.2428	259.474
71.144	1011.9	295.7	22.5	72.5	18.3	.0094	.647	1.275	2.810	20.4204	290.447
*****	*****	*****	*****	*****							
71.395	1015.9	296.0	22.8	73.1							
.050	.7	.1	.1	.2	DEVIATIONS						

TABLE 28
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11 PART 22A TEST DESCRIPTION

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 16.3 MG OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 022) INLET PRESSURE = 1000 PSIA (NOMINAL).

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.87	50.2	82.4	.91	48.0	86.5	1013.2	84.4	.0433
.78	50.2	81.2	.81	48.4	85.8	1013.2	83.5	.0388
.70	50.2	80.5	.71	48.6	85.2	1009.2	82.8	.0344
.59	50.4	80.2	.60	49.2	84.9	1009.2	82.5	.0295
.50	50.1	80.2	.50	49.0	84.9	1009.2	82.5	.0245
.41	50.2	80.3	.41	49.5	84.9	1009.2	82.6	.0201
.31	50.2	80.7	.31	49.5	85.0	1009.2	82.8	.0151
.26	50.2	80.9	.26	49.7	85.1	1009.2	83.0	.0129
.21	50.6	81.2	.21	50.3	85.2	1009.2	83.2	.0105
.14	50.1	81.9	.14	49.5	85.6	1009.2	83.7	.0069
.14	50.6	82.5	.14	50.1	85.8	1009.2	84.1	.0070
.21	49.7	82.3	.21	49.2	85.7	1009.2	84.0	.0104
.26	49.7	82.0	.26	49.2	85.6	1009.2	83.8	.0129
.31	50.1	81.6	.31	49.3	85.4	1009.2	83.5	.0152
.40	49.9	80.7	.40	49.2	84.9	1005.3	82.8	.0197
.50	49.9	79.8	.50	49.0	84.4	1005.3	82.1	.0246
.59	50.4	78.8	.61	49.2	83.7	1005.3	81.2	.0296
.68	50.1	78.1	.71	48.4	83.0	1005.3	80.5	.0340
.76	49.9	77.2	.80	48.0	82.3	1001.3	79.7	.0381
.85	50.2	76.4	.92	48.0	81.4	1001.3	78.9	.0433

TABLE 28
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11 PART 22A TEST DESCRIPTION

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 16.3 MG OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 022) INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1013.2	84.4	.0433	133.205	133.205	133.205	-0.000	133.205
1013.2	83.5	.0388	115.213	115.213	115.213	-0.000	115.213
1009.2	82.8	.0344	99.430	99.430	99.430	-0.000	99.430
1009.2	82.5	.0295	82.157	82.701	82.429	-0.000	82.429
1009.2	82.5	.0245	65.243	65.971	65.607	-0.000	65.607
1009.2	82.6	.0201	51.604	52.398	52.001	-0.000	52.001
1009.2	82.8	.0151	37.884	38.081	37.982	-0.000	37.983
1009.2	83.0	.0129	31.345	31.472	31.408	-0.000	31.409
1009.2	83.2	.0105	24.632	24.705	24.668	-0.000	24.669
1009.2	83.7	.0069	15.374	15.381	15.377	-0.000	15.378
1009.2	84.1	.0070	15.605	15.667	15.636	-0.000	15.636
1009.2	84.0	.0104	24.401	24.533	24.467	-0.000	24.467
1009.2	83.8	.0129	31.461	31.644	31.552	-0.000	31.553
1009.2	83.5	.0152	38.058	38.253	38.155	-0.000	38.156
1005.3	82.8	.0197	50.728	51.451	51.089	-0.000	51.090
1005.3	82.1	.0246	66.243	66.918	66.581	-0.000	66.581
1005.3	81.2	.0296	83.513	84.279	83.896	-0.000	83.896
1005.3	80.5	.0340	100.062	100.062	100.062	-0.000	100.062
1001.3	79.7	.0381	115.528	115.528	115.528	-0.000	115.529
1001.3	78.9	.0433	137.308	137.308	137.308	-0.000	137.309

TARE DIFF. PRESS = -1.64000E-04 + -1.26930E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 28
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11 PART 22A TEST DESCRIPTION

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 16.3 MG OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 022) INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/ MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
71.235	1013.2	302.3	29.1	84.4	82.2	.0433	2.904	5.718	12.605	9.3653	133.205
71.235	1013.2	301.8	28.6	83.5	73.8	.0388	2.605	5.130	11.310	8.1003	115.213
70.956	1009.2	301.4	28.2	82.8	65.3	.0344	2.308	4.544	10.018	6.9907	99.430
70.956	1009.2	301.2	28.1	82.5	56.1	.0295	1.979	3.898	8.593	5.7954	82.429
70.956	1009.2	301.2	28.1	82.5	46.5	.0245	1.642	3.232	7.126	4.6127	65.607
70.956	1009.2	301.3	28.1	82.6	38.1	.0201	1.345	2.648	5.838	3.6560	52.001
70.956	1009.2	301.4	28.2	82.8	28.7	.0151	1.015	1.999	4.408	2.6704	37.983
70.956	1009.2	301.5	28.4	83.0	24.4	.0129	.862	1.698	3.744	2.2082	31.409
70.956	1009.2	301.6	28.5	83.2	20.0	.0105	.706	1.389	3.063	1.7344	24.669
70.956	1009.2	301.9	28.7	83.7	13.2	.0069	.464	.915	2.016	1.0812	15.378
70.956	1009.2	302.1	29.0	84.1	13.3	.0070	.469	.924	2.038	1.0993	15.636
70.956	1009.2	302.1	28.9	84.0	19.7	.0104	.696	1.370	3.019	1.7202	24.467
70.956	1009.2	301.9	28.8	83.8	24.5	.0129	.865	1.704	3.756	2.2184	31.553
70.956	1009.2	301.8	28.6	83.5	28.8	.0152	1.016	2.000	4.409	2.6826	38.156
70.677	1005.3	301.4	28.2	82.8	37.2	.0197	1.315	2.588	5.706	3.5920	51.090
70.677	1005.3	301.0	27.8	82.1	46.6	.0246	1.645	3.240	7.142	4.6811	66.581
70.677	1005.3	300.5	27.3	81.2	56.2	.0296	1.985	3.908	8.615	5.8985	83.896
70.677	1005.3	300.1	27.0	80.5	64.5	.0340	2.278	4.486	9.889	7.0350	100.062
70.398	1001.3	299.7	26.5	79.7	72.2	.0381	2.550	5.021	11.069	8.1225	115.529
70.398	1001.3	299.2	26.1	78.9	82.0	.0433	2.897	5.705	12.577	9.6538	137.309
*****	*****	*****	******	******							
70.872	1008.0	301.3	28.1	82.6							
.173	2.5	.6	.6	1.1	DEVIATIONS						

TABLE 29
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11 PART 228 TEST DESCRIPTION

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 16.3 MG OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN S/N 022) INLET PRESSURE = 415 PSIA (NOMINAL).

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSI_A)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSI_A)	TEMP (DEG. F)	PRESSURE (PSI_A)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.58	49.9	72.9	.60	48.8	74.3	417.7	73.6	.0702
.49	50.2	72.8	.51	49.3	74.3	417.2	73.6	.0597
.40	50.4	72.8	.40	49.9	74.5	416.4	73.7	.0485
.31	50.6	73.0	.30	50.1	74.6	416.4	73.8	.0368
.26	49.7	73.1	.25	49.3	74.7	415.7	73.9	.0304
.21	50.2	73.1	.20	49.9	74.8	415.7	74.0	.0250
.14	50.4	73.5	.13	50.3	75.0	415.7	74.3	.0164
.14	49.9	73.8	.13	49.7	75.4	415.7	74.6	.0161
.22	49.9	73.7	.22	49.5	75.4	415.1	74.5	.0265
.27	49.7	73.6	.26	49.3	75.4	415.1	74.5	.0317
.32	50.2	73.5	.31	49.7	75.3	415.1	74.4	.0378
.41	50.1	73.3	.41	49.3	75.2	413.8	74.2	.0488
.50	50.1	73.1	.51	49.2	74.8	413.1	73.9	.0602
.57	50.6	73.1	.59	49.5	74.6	412.5	73.6	.0703
.57	50.6	73.3	.59	49.5	73.6	412.5	73.6	.0703

TABLE 29
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 16.3 MG OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 022) INLET PRESSURE 415 PSIA (NOMINAL).

TEST NUMBER 11 PART 228 TEST DESCRIPTION

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (CFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
417.1	73.6	.0712	303.249	303.246	303.246	.001	303.246
417.0	73.6	.0597	211.909	211.909	211.907	.000	211.908
416.4	73.7	.0485	150.912	150.912	150.914	.000	150.911
416.4	73.8	.0368	102.557	102.557	102.557	.000	102.556
415.1	73.9	.0304	79.661	79.718	79.889	.000	79.888
415.1	74.0	.0250	61.445	61.787	61.616	.000	61.615
415.1	74.3	.0164	37.866	37.898	37.852	-0.000	37.851
415.1	74.6	.0161	37.111	37.322	37.216	-0.000	37.215
415.1	74.5	.0285	67.178	67.476	67.277	.000	67.276
415.1	74.5	.0317	83.980	84.542	84.264	.000	84.263
415.1	74.4	.0378	106.666	106.666	106.666	.000	106.665
413.8	74.2	.0488	152.492	152.492	152.492	.000	152.492
413.1	73.9	.0662	215.385	215.385	215.385	.000	215.385
412.5	73.6	.0773	307.039	307.039	307.039	.001	307.038
412.5	73.6	.0773	-0.001		-0.000	.001	-0.001

TARE DIFF. PRESS = -3.4000E-05 + -4.4400E-04 (ACFM) + 1.5933E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 29
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11 PART 22B TEST DESCRIPTION CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 16.3 MG OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 022) INLET PRESSURE = 415 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/ MIN	ACFM	SCFH	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.365	417.1	296.3	23.1	73.6	56.1	.0702	1.982	3.903	8.605	21.3203	303.246
29.320	417.0	296.2	23.1	73.6	47.6	.0597	1.682	3.314	7.301	14.8986	211.908
29.274	416.4	296.3	23.1	73.7	38.6	.0485	1.364	2.685	5.920	10.6101	150.911
29.274	416.4	296.4	23.2	73.8	29.3	.0366	1.034	2.037	4.487	7.2104	102.556
29.229	415.7	296.4	23.3	73.9	24.2	.0304	.855	1.683	3.710	5.6167	79.888
29.229	415.7	296.5	23.3	74.0	19.8	.0250	.701	1.380	3.043	4.3320	61.615
29.229	415.7	296.6	23.5	74.3	13.0	.0164	.461	.907	2.000	2.6612	37.851
29.229	415.7	296.8	23.7	74.6	12.8	.0161	.452	.890	1.963	2.6165	37.215
29.183	415.1	296.8	23.6	74.5	21.1	.0265	.743	1.464	3.227	4.7300	67.276
29.183	415.1	296.8	23.6	74.5	25.1	.0317	.888	1.748	3.853	5.9243	84.263
29.183	415.1	296.7	23.5	74.4	30.0	.0378	1.059	2.085	4.597	7.4993	106.665
29.092	413.8	296.6	23.5	74.2	38.6	.0486	1.364	2.685	5.920	10.7212	152.492
29.046	413.1	296.5	23.3	73.9	47.6	.0602	1.680	3.308	7.292	15.1431	215.385
29.001	412.5	296.3	23.1	73.6	55.5	.0703	1.960	3.859	8.508	21.5869	307.038
29.001	412.5	296.2	23.1	73.6	55.5	.0703	1.960	3.859	8.509	-0.0001	-0.001
*****	*****	*****	******	******							
29.189	415.2	296.5	23.3	74.0							
.085	1.2	.2	.2	.3	DEVIATIONS						

TABLE 30
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11 PART 22C TEST DESCRIPTION

CONTAMINATED CONTROL - FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 32.0 MG OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 022) INLET PRESSURE = 1000 PSIA (NOMINAL).

FLOWMETER ONE			FLOWMETER TWO			TEST SPECIMEN INLET CONDITIONS		
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.84	50.1	68.2	.91	47.8	75.2	1015.9	71.7	.0420
.76	50.1	67.4	.81	48.1	74.8	1015.9	71.1	.0378
.67	50.4	66.2	.70	48.0	74.1	1011.9	70.2	.0336
.58	50.1	65.0	.60	48.7	73.8	1011.9	69.9	.0289
.49	50.1	66.3	.50	49.1	74.1	1011.9	70.2	.0244
.40	50.2	67.3	.40	49.5	75.1	1011.9	71.2	.0198
.30	50.2	69.1	.30	49.7	76.2	1015.9	72.6	.0149
.26	49.9	69.7	.25	49.3	76.5	1015.9	73.1	.0124
.22	49.9	70.1	.21	49.3	76.6	1015.9	73.3	.0105
.14	50.2	71.4	.13	49.9	76.4	1015.9	73.9	.0066
.14	50.2	72.5	.13	49.9	76.3	1015.9	74.4	.0066
.22	50.1	72.2	.22	49.7	76.2	1015.9	74.2	.0110
.26	50.2	72.0	.26	49.9	76.0	1015.9	74.0	.0129
.31	50.1	71.6	.31	49.5	75.8	1015.9	73.7	.0152
.41	50.2	70.8	.41	49.5	75.2	1015.9	73.0	.0200
.49	49.7	70.2	.50	48.7	74.1	1015.9	72.1	.0241
.58	50.2	69.5	.60	48.9	73.2	1015.9	71.4	.0289
.67	49.9	68.8	.71	48.3	72.3	1015.9	70.6	.0334
.76	50.1	67.7	.81	48.3	71.6	1015.9	69.7	.0379
.84	50.2	67.2	.91	47.9	70.9	1015.9	69.0	.0423

TABLE 30
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11 PART 22C TEST DESCRIPTION CONTAMINATED CONTROL - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 32.0 MG OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 022) INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1015.9	71.7	.0420	137.940	137.940	137.940	=0.000	137.940
1015.9	71.1	.0378	119.632	119.632	119.632	=0.000	119.632
1011.9	70.2	.0336	103.218	103.218	103.218	=0.000	103.218
1011.9	69.9	.0289	84.807	85.542	85.174	=0.000	85.175
1011.9	70.2	.0244	68.661	69.443	69.052	=0.000	69.052
1011.9	71.2	.0198	53.006	53.661	53.333	=0.000	53.334
1015.9	72.6	.0149	38.916	39.107	39.012	=0.000	39.012
1015.9	73.1	.0124	31.326	31.453	31.390	=0.000	31.390
1015.9	73.3	.0105	25.590	25.653	25.622	=0.000	25.622
1015.9	73.9	.0066	15.103	15.115	15.109	=0.000	15.109
1015.9	74.4	.0066	15.103	15.229	15.166	=0.000	15.166
1015.9	74.2	.0110	26.865	26.973	26.919	=0.000	26.919
1015.9	74.0	.0129	32.659	32.833	32.746	=0.000	32.746
1015.9	73.7	.0152	39.554	39.799	39.676	=0.000	39.677
1015.9	73.0	.0200	53.883	54.292	54.088	=0.000	54.088
1015.9	72.1	.0241	67.911	68.496	68.204	=0.000	68.204
1015.9	71.4	.0289	85.300	85.857	85.578	=0.000	85.579
1015.9	70.6	.0334	102.902	102.902	102.902	=0.000	102.903
1015.9	69.7	.0379	121.210	121.210	121.210	=0.000	121.210
1015.9	69.0	.0423	141.728	141.728	141.728	=0.000	141.728

TARE DIFF. PRESS = -1.64000E-04 + -1.26930E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 30

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11 PART 22C TEST DESCRIPTION CONTAMINATED CONTROL - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 32.0 MG OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 022) INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS									NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE					
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
71.423	1015.9	295.2	22.1	71.7	82.0	.0420	2.894	5.699	12.565	9.6981	137.940
71.423	1015.9	294.9	21.7	71.1	73.8	.0378	2.606	5.131	11.312	8.4110	119.632
71.144	1011.9	294.4	21.2	70.2	65.4	.0336	2.311	4.551	10.034	7.2570	103.218
71.144	1011.9	294.2	21.1	69.9	56.3	.0289	1.987	3.913	8.626	5.9884	85.175
71.144	1011.9	294.4	21.2	70.2	47.5	.0244	1.676	3.301	7.277	4.8549	69.052
71.144	1011.9	294.9	21.8	71.2	38.5	.0198	1.359	2.675	5.897	3.7497	53.334
71.423	1015.9	295.7	22.6	72.6	29.1	.0149	1.028	2.023	4.460	2.7428	39.012
71.423	1015.9	296.0	22.8	73.1	24.1	.0124	.851	1.676	3.696	2.2069	31.390
71.423	1015.9	296.1	23.0	73.3	20.4	.0105	.720	1.418	3.127	1.8014	25.622
71.423	1015.9	296.4	23.3	73.9	12.8	.0066	.452	.890	1.962	1.0623	15.109
71.423	1015.9	296.7	23.6	74.4	12.8	.0066	.452	.890	1.961	1.0663	15.166
71.423	1015.9	296.6	23.5	74.2	21.3	.0110	.752	1.480	3.264	1.8926	26.919
71.423	1015.9	296.5	23.3	74.0	25.1	.0129	.887	1.746	3.849	2.3023	32.746
71.423	1015.9	296.3	23.2	73.7	29.6	.0152	1.044	2.056	4.533	2.7895	39.677
71.423	1015.9	295.9	22.8	73.0	38.9	.0200	1.374	2.706	5.965	3.8028	54.088
71.423	1015.9	295.5	22.3	72.1	47.0	.0241	1.660	3.269	7.207	4.7952	68.204
71.423	1015.9	295.0	21.9	71.4	56.4	.0289	1.992	3.923	8.648	6.0168	85.579
71.423	1015.9	294.6	21.4	70.6	65.3	.0334	2.306	4.541	10.012	7.2348	102.903
71.423	1015.9	294.1	20.9	69.7	74.3	.0379	2.624	5.166	11.390	8.5219	121.210
71.423	1015.9	293.7	20.6	69.0	83.0	.0423	2.932	5.773	12.728	9.9645	141.728
*****	*****	*****	******	******							
71.367	1015.1	295.4	22.2	72.0							
.089	1.3	.8	.8	1.5	DEVIATIONS						

TABLE 31
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11 PART 220 TEST DESCRIPTION

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 32.0 MG OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 022) INLET PRESSURE = 415 PSIA (NOMINAL).

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS.		
FLOWMETER ONL			FLOWMETER T40					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.55	50.6	81.6	.56	49.2	82.4	416.9	82.0	.0664
.50	50.6	81.6	.51	49.5	82.4	416.2	82.0	.0606
.40	50.4	81.6	.40	49.7	82.5	416.2	82.1	.0484
.31	50.2	81.6	.31	49.7	82.7	415.6	82.1	.0369
.26	50.6	81.7	.25	50.1	82.8	415.6	82.3	.0308
.21	50.2	81.9	.20	49.9	83.0	415.6	82.5	.0250
.14	50.1	82.2	.14	49.9	83.3	415.6	82.8	.0167
.14	49.9	82.5	.14	49.3	83.5	415.6	83.0	.0166
.22	49.5	83.5	.22	49.2	83.5	415.6	83.0	.0265
.27	49.9	83.4	.26	49.3	83.5	415.6	82.9	.0316
.31	49.7	82.4	.31	49.2	83.5	415.6	83.0	.0366
.41	49.9	82.3	.41	49.2	83.5	415.6	82.9	.0487
.50	50.1	82.1	.50	49.2	83.3	414.3	82.7	.0599
.54	50.2	82.4	.55	49.2	83.4	414.3	82.9	.0653

TABLE 31
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11 PART 22D TEST DESCRIPTION CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 32.0 MG OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 022) INLET PRESSURE = 415 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
416.9	82.0	.0664	307.129	307.129	307.129	.001	307.128
416.2	82.1	.0466	242.736	242.736	242.736	.000	242.735
416.2	82.1	.0484	163.823	163.823	163.823	.000	163.823
415.6	82.1	.0309	111.425	111.425	111.425	.000	111.424
415.9	82.3	.0238	86.935	87.435	87.185	.000	87.185
415.9	82.5	.0254	66.214	66.918	66.561	.000	66.560
415.9	82.8	.0167	41.234	41.413	41.324	.000	41.323
415.6	83.0	.0166	40.770	40.952	40.861	.000	40.861
415.6	83.0	.0265	71.576	72.284	71.930	.000	71.930
415.9	82.9	.0316	89.625	90.592	90.109	.000	90.108
415.6	83.0	.0306	110.794	110.794	110.794	.000	110.793
415.6	82.9	.0487	165.086	165.086	165.086	.000	165.085
414.3	82.7	.0599	238.948	238.948	238.948	.000	238.948
414.2	82.9	.0753	295.766	295.766	295.766	.001	295.765

TARE DIFF. PRESS = -3.40000E-05 + -4.44000E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 31
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11 PART 220 TEST DESCRIPTION

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 32.0 MG OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 022) INLET PRESSURE = 415 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS									NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE					
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.311	416.7	300.9	27.8	82.0	52.2	.0664	1.842	3.029	7.995	21.5933	307.128
29.269	416.1	300.9	27.8	82.0	47.5	.0608	1.678	3.303	7.282	17.0660	242.735
29.265	416.1	301.0	27.8	82.1	38.0	.0484	1.341	2.204	5.820	11.5179	163.823
29.219	415.5	301.0	27.8	82.1	28.9	.0369	1.019	2.001	4.424	7.8339	111.424
29.219	415.5	301.1	27.9	82.3	24.1	.0309	.851	1.679	3.694	6.1297	87.185
29.219	415.5	301.2	28.0	82.5	19.5	.0250	.690	1.357	2.997	4.6797	66.560
29.219	415.5	301.4	28.2	82.8	13.1	.0167	.462	.907	2.004	2.9053	41.323
29.219	415.5	301.5	28.4	83.0	13.0	.0166	.458	.901	1.987	2.8728	40.861
29.219	415.5	301.5	28.4	83.0	20.7	.0265	.732	1.441	3.178	5.0572	71.930
29.219	415.5	301.5	28.4	82.9	24.7	.0316	.873	1.717	3.791	6.3353	90.108
29.219	415.5	301.5	28.4	83.0	28.6	.0366	1.009	1.989	4.389	7.7895	110.793
29.219	415.5	301.4	28.3	82.9	38.0	.0487	1.343	2.649	5.841	11.6066	165.085
29.128	414.3	301.3	28.2	82.7	46.7	.0599	1.648	3.249	7.154	16.7997	238.948
29.128 *****	414.3 *****	301.4 *****	28.3 ******	82.9 ******	54.9	.0703	1.936	3.819	8.416	20.7943	295.765
29.219	415.5	301.3	28.1	82.6							
.026	.4	.2	.2	.4	DEVIATIONS						

TABLE 32
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11 PART 22E1 TEST DESCRIPTION

CONTAMINATED CONTROL - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 53.2 MG OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 022) INLET PRESSURE = 1000 PSIA (NOMINAL).

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.87	50.1	66.8	.91	47.8	72.4	1009.2	69.6	.0432
.78	49.9	65.9	.81	48.0	71.6	1009.2	68.8	.0385
.67	50.5	65.6	.71	49.0	71.1	1009.2	68.4	.0338
.58	50.1	65.7	.60	48.8	71.1	1009.2	68.4	.0290
.49	50.3	65.8	.51	49.3	71.1	1009.2	68.5	.0247
.40	50.1	66.3	.40	49.3	71.3	1009.2	68.8	.0197
.30	49.7	67.0	.30	49.2	71.8	1009.2	69.4	.0149
.26	49.9	67.4	.26	49.3	71.8	1009.2	69.6	.0127
.21	50.1	67.9	.20	49.7	71.8	1009.2	69.8	.0103
.14	49.7	68.7	.14	49.3	71.8	1009.2	70.2	.0068
.14	49.7	69.9	.14	49.3	72.8	1009.2	71.3	.0068
.22	49.4	69.5	.22	48.8	72.6	1009.2	71.0	.0108
.27	49.9	69.5	.26	49.3	72.9	1009.2	71.2	.0130
.31	50.1	69.4	.31	49.5	73.1	1009.2	71.2	.0151
.41	49.9	68.8	.41	49.2	73.0	1009.2	70.9	.0201
.49	49.5	68.1	.51	48.6	72.6	1009.2	70.3	.0243
.58	50.1	67.5	.60	48.8	72.2	1009.2	69.8	.0290
.67	50.5	66.6	.71	49.0	71.5	1005.3	69.0	.0341
.76	49.9	65.7	.81	48.2	70.9	1005.3	68.3	.0383
.84	50.3	65.1	.91	48.0	70.2	1005.3	67.7	.0427

TABLE 32
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11 PART 22E1 TEST DESCRIPTION CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 53.2 MG OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 022) INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1009.2	69.6	.0432	148.963	148.963	148.963	-0.000	148.963
1009.2	68.8	.0385	128.104	128.104	128.104	-0.000	128.104
1009.2	68.4	.0338	110.405	110.405	110.405	-0.000	110.406
1009.2	68.4	.0290	90.309	91.127	90.718	-0.000	90.718
1009.2	68.5	.0247	73.371	74.060	73.716	-0.000	73.716
1009.2	68.8	.0197	55.457	56.362	55.909	-0.000	55.909
1009.2	69.4	.0149	40.172	40.426	40.299	-0.000	40.299
1009.2	69.6	.0127	33.277	33.450	33.364	-0.000	33.364
1009.2	69.8	.0103	25.861	25.915	25.888	-0.000	25.888
1009.2	70.2	.0068	16.185	16.164	16.174	-0.000	16.175
1009.2	71.3	.0068	16.011	16.221	16.116	-0.000	16.116
1009.2	71.0	.0108	27.251	27.409	27.330	-0.000	27.330
1009.2	71.2	.0130	34.030	34.257	34.143	-0.000	34.144
1009.2	71.2	.0151	40.867	41.177	41.022	-0.000	41.022
1009.2	70.9	.0201	56.461	56.994	56.727	-0.000	56.727
1009.2	70.3	.0243	71.998	72.480	72.239	-0.000	72.239
1009.2	69.8	.0290	90.309	91.127	90.718	-0.000	90.718
1005.3	69.0	.0341	111.354	111.354	111.354	-0.000	111.354
1005.3	68.3	.0383	129.684	129.684	129.684	-0.000	129.685
1005.3	67.7	.0427	151.491	151.491	151.491	-0.000	151.492

TARE DIFF. PRESS = -1.64000E-04 + -1.26930E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 32
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11 PART 22E1 TEST DESCRIPTION

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 53.2 MG. OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 022) INLET PRESSURE = 1000. PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	CFM	SCFM	GN_2 KG/HR	GN_2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
70.956	1009.2	294.1	20.9	69.6	84.0	.0432	2.966	5.839	12.874	10.4732	148.963
70.956	1009.2	293.6	20.4	68.8	75.1	.0385	2.652	5.221	11.511	9.0066	128.104
70.956	1009.2	293.4	20.2	68.4	65.9	.0338	2.327	4.581	10.100	7.7623	110.406
70.956	1009.2	293.4	20.2	68.4	56.5	.0290	1.996	3.931	8.667	6.3781	90.718
70.956	1009.2	293.4	20.3	68.5	48.1	.0247	1.697	3.342	7.368	5.1827	73.716
70.956	1009.2	293.6	20.4	68.8	38.3	.0197	1.353	2.665	5.875	3.9308	55.909
70.956	1009.2	293.9	20.8	69.4	29.0	.0149	1.024	2.016	4.445	2.8333	40.299
70.956	1009.2	294.1	20.9	69.6	24.7	.0127	.873	1.719	3.789	2.3457	33.364
70.956	1009.2	294.2	21.0	69.8	20.0	.0103	.705	1.387	3.058	1.8201	25.888
70.956	1009.2	294.4	21.2	70.2	13.2	.0068	.465	.916	2.020	1.1372	16.175
70.956	1009.2	295.0	21.9	71.3	13.2	.0068	.464	.915	2.016	1.1331	16.116
70.956	1009.2	294.8	21.7	71.0	20.9	.0108	.739	1.455	3.208	1.9215	27.330
70.956	1009.2	294.9	21.8	71.2	25.2	.0130	.890	1.753	3.865	2.4005	34.144
70.956	1009.2	295.0	21.8	71.2	29.4	.0151	1.037	2.041	4.501	2.8841	41.022
70.956	1009.2	294.8	21.6	70.9	38.9	.0201	1.374	2.706	5.966	3.9883	56.727
70.956	1009.2	294.5	21.3	70.3	47.2	.0243	1.665	3.279	7.230	5.0789	72.239
70.956	1009.2	294.2	21.0	69.8	56.4	.0290	1.991	3.920	8.643	6.3781	90.718
70.677	1005.3	293.7	20.6	69.0	66.2	.0341	2.339	4.605	10.152	7.8290	111.354
70.677	1005.3	293.3	20.2	68.3	74.3	.0383	2.625	5.170	11.397	9.1177	129.685
70.677	1005.3	293.0	19.8	67.7	83.0	.0427	2.931	5.770	12.722	10.6509	151.492
*****	*****	*****	******	******							
70.914	1008.6	294.1	20.9	69.6							
.071	1.0	.5	.5	.9	DEVIATIONS						

TABLE 33
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11 PART 22F TEST DESCRIPTION

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 52.2 MG OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 022) INLET PRESSURE = 415 PSIA (NOMINAL).

FLOWMETER CONDITIONS

FLOWMETER ONE			FLOWMETER TWO		
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)
.53	50.1	76.2	.54	49.0	77.4
.50	50.4	76.4	.51	49.3	77.5
.40	50.4	76.5	.40	49.7	77.7
.31	50.4	76.7	.30	49.9	77.8
.26	50.4	76.8	.26	50.1	77.9
.21	50.4	76.9	.20	50.1	78.1
.14	50.2	77.2	.13	49.9	78.5
.14	50.1	77.6	.13	49.9	78.8
.22	49.9	77.6	.21	49.3	78.9
.26	50.2	77.6	.26	49.9	79.0
.31	49.9	77.7	.31	49.3	79.2
.41	50.1	77.6	.41	49.3	79.2
.49	50.2	77.6	.50	49.2	79.3
.53	49.9	77.9	.54	49.0	79.4

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
416.2	76.8	.0642
415.6	76.9	.0603
415.6	77.1	.0485
415.6	77.2	.0368
415.6	77.3	.0313
415.6	77.5	.0249
415.6	77.8	.0164
415.6	78.2	.0163
415.6	78.3	.0256
414.9	78.3	.0316
414.3	78.4	.0373
413.7	78.4	.0492
413.0	78.4	.0599
413.0	78.6	.0639

TABLE 33
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11 PART 22F TEST DESCRIPTION CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 52.2 MG OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 022) INLET PRESSURE = 415 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
416.2	76.8	.0642	306.919	306.919	306.919	.001	306.918
415.6	76.9	.0603	259.571	259.571	259.571	.000	259.570
415.6	77.1	.0485	172.451	172.451	172.451	.000	172.450
415.6	77.2	.0368	115.634	115.634	115.634	.000	115.633
415.6	77.3	.0313	92.101	92.591	92.346	.000	92.346
415.6	77.5	.0249	68.121	68.602	68.361	.000	68.361
415.6	77.8	.0164	41.562	41.759	41.661	-0.000	41.660
415.6	78.2	.0163	41.273	41.471	41.372	-0.000	41.371
415.6	78.3	.0256	70.619	71.442	71.031	.000	71.030
414.9	78.3	.0316	92.587	93.538	93.062	.000	93.062
414.3	78.4	.0373	117.528	117.528	117.528	.000	117.527
413.7	78.4	.0492	175.292	175.292	175.292	.000	175.291
413.0	78.4	.0599	255.467	255.467	255.467	.000	255.467
413.0	78.6	.0639	306.919	306.919	306.919	.001	306.918

TARE DIFF. PRESS = -3.40000E-05 + -4.44000E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 33
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11 PART 22F TEST DESCRIPTION

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 52.2 MG OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 022) INLET PRESSURE = 415 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/ MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.265	416.2	298.0	24.9	76.8	50.8	.0642	1.795	3.534	7.792	21.5785	306.918
29.219	415.6	298.1	25.0	76.9	47.7	.0603	1.684	3.316	7.310	18.2496	259.570
29.219	415.6	298.2	25.1	77.1	38.3	.0485	1.353	2.665	5.874	12.1245	172.450
29.219	415.6	298.3	25.1	77.2	29.1	.0368	1.027	2.022	4.457	8.1298	115.633
29.219	415.6	298.3	25.2	77.3	24.8	.0313	.874	1.721	3.795	6.4925	92.346
29.219	415.6	298.4	25.3	77.5	19.6	.0249	.694	1.366	3.011	4.8062	68.361
29.219	415.6	298.6	25.5	77.8	13.0	.0164	.458	.902	1.988	2.9290	41.660
29.219	415.6	298.8	25.7	78.2	12.9	.0163	.454	.894	1.971	2.9087	41.371
29.219	415.6	298.9	25.7	78.3	20.2	.0256	.712	1.401	3.089	4.9939	71.030
29.174	414.9	298.9	25.7	78.3	24.9	.0316	.878	1.728	3.810	6.5429	93.062
29.128	414.3	299.0	25.8	78.4	29.3	.0373	1.035	2.038	4.494	8.2630	117.527
29.083	413.7	298.9	25.8	78.4	38.6	.0492	1.362	2.683	5.914	12.3242	175.291
29.037	413.0	299.0	25.8	78.4	46.9	.0599	1.656	3.260	7.188	17.9611	255.467
29.037 *****	413.0 *****	299.1 *****	25.9 *****	78.6 *****	50.0	.0639	1.765	3.476	7.663	21.5785	306.918
29.177	415.0	298.6	25.5	77.8							
.061	.9	.3	.3	.6	DEVIATIONS						

TABLE 34
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11 PART 22G TEST DESCRIPTION

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 74.3 MG. OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 022) INLET PRESSURE = 1000 PSIA (NOMINAL).

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSI_A)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSI_A)	TEMP (DEG. F)	PRESSURE (PSI_A)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.87	49.7	76.7	.91	47.4	81.7	1013.2	79.2	.0426
.78	50.4	74.7	.81	48.4	76.2	1013.2	77.5	.0388
.69	50.4	74.4	.71	49.0	79.9	1013.2	77.2	.0343
.60	50.2	74.3	.61	49.0	79.7	1013.2	77.0	.0297
.50	50.1	74.5	.50	49.2	79.6	1013.2	77.0	.0246
.41	50.1	74.8	.40	49.3	79.8	1013.2	77.3	.0201
.32	50.4	75.5	.31	49.9	80.3	1017.2	77.9	.0157
.27	49.9	76.2	.25	49.3	80.6	1013.2	78.4	.0128
.22	50.2	76.9	.20	49.9	81.1	1017.2	79.0	.0104
.15	49.9	77.8	.13	49.5	81.6	1017.2	79.7	.0068
.15	49.5	79.7	.13	49.1	82.8	1017.2	81.3	.0068
.22	49.5	79.7	.21	49.0	82.8	1017.2	81.3	.0106
.28	49.9	79.5	.26	49.3	82.6	1017.2	81.1	.0131
.32	50.2	79.1	.31	49.7	82.5	1017.2	80.8	.0154
.42	49.9	78.6	.41	49.2	82.3	1017.2	80.4	.0201
.52	50.2	77.6	.51	49.2	81.7	1013.2	79.7	.0252
.60	50.4	76.9	.61	49.2	81.3	1013.2	79.1	.0298
.70	50.1	75.9	.71	48.4	80.6	1013.2	78.2	.0341
.76	50.2	75.1	.81	48.4	79.8	1013.2	77.4	.0380
.84	50.1	74.5	.91	47.8	79.2	1013.2	76.8	.0423

TABLE 34
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11 PART 226 TEST DESCRIPTION CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 74.3 MG OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 022) INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1013.2	79.2	.0426	153.617	153.617	153.617	-0.000	153.617
1013.2	77.5	.0388	135.941	135.941	135.941	-0.000	135.941
1013.2	77.2	.0343	115.739	115.739	115.739	-0.000	115.739
1013.2	77.0	.0297	96.169	96.169	96.169	-0.000	96.169
1013.2	77.0	.0246	75.314	75.967	75.640	-0.000	75.641
1013.2	77.3	.0201	58.187	58.606	58.396	-0.000	58.397
1017.2	77.9	.0157	43.767	44.009	43.888	-0.000	43.888
1013.2	78.4	.0128	34.103	34.271	34.187	-0.000	34.187
1017.2	79.0	.0104	26.523	26.629	26.576	-0.000	26.576
1017.2	79.7	.0068	16.454	16.544	16.499	-0.000	16.499
1017.2	81.3	.0068	16.164	16.315	16.240	-0.000	16.240
1017.2	81.3	.0106	27.275	27.490	27.382	-0.000	27.383
1017.2	81.1	.0131	35.145	35.422	35.283	-0.000	35.284
1017.2	80.8	.0154	42.552	42.797	42.675	-0.000	42.675
1017.2	80.4	.0201	57.936	58.290	58.113	-0.000	58.114
1013.2	79.7	.0252	76.806	77.229	77.018	-0.000	77.018
1013.2	79.1	.0298	96.169	96.169	96.169	-0.000	96.169
1013.2	78.2	.0341	114.792	114.792	114.792	-0.000	114.792
1013.2	77.4	.0380	135.941	135.941	135.941	-0.000	135.941
1013.2	76.8	.0423	159.299	159.299	159.299	-0.000	159.299

TARE DIFF. PRESS = -1.64000E-04 + -1.26930E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 34
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11 PART 22G TEST DESCRIPTION CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 74.3 MG OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 022) INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
71.235	1013.2	299.4	26.2	79.2	81.6	.0426	2.883	5.676	12.514	10.8004	153.617
71.235	1013.2	298.4	25.3	77.5	74.6	.0388	2.635	5.189	11.440	9.5576	135.941
71.235	1013.2	298.3	25.1	77.2	66.1	.0343	2.336	4.599	10.139	8.1373	115.739
71.235	1013.2	298.2	25.0	77.0	57.2	.0297	2.019	3.976	8.765	6.7613	96.169
71.235	1013.2	298.2	25.0	77.0	47.4	.0246	1.674	3.296	7.266	5.3181	75.641
71.235	1013.2	298.3	25.2	77.3	38.7	.0201	1.365	2.688	5.925	4.1057	58.397
71.514	1017.2	298.7	25.5	77.9	30.3	.0157	1.071	2.109	4.649	3.0857	43.888
71.235	1013.2	298.9	25.8	78.4	24.5	.0128	.866	1.706	3.761	2.4036	34.187
71.514	1017.2	299.3	26.1	79.0	20.0	.0104	.706	1.390	3.065	1.8685	26.576
71.514	1017.2	299.7	26.5	79.7	13.1	.0068	.464	.914	2.015	1.1600	16.499
71.514	1017.2	300.5	27.4	81.3	13.0	.0068	.458	.903	1.990	1.1418	16.240
71.514	1017.2	300.5	27.4	81.3	20.4	.0106	.719	1.416	3.121	1.9252	27.383
71.514	1017.2	300.4	27.3	81.1	25.2	.0131	.890	1.753	3.864	2.4807	35.284
71.514	1017.2	300.3	27.1	80.8	29.6	.0154	1.047	2.062	4.545	3.0004	42.675
71.514	1017.2	300.1	26.9	80.4	38.6	.0201	1.363	2.684	5.918	4.0858	58.114
71.235	1013.2	299.6	26.5	79.7	48.3	.0252	1.706	3.359	7.405	5.4149	77.018
71.235	1013.2	299.3	26.1	79.1	57.1	.0298	2.016	3.970	8.752	6.7613	96.169
71.235	1013.2	298.8	25.7	78.2	65.6	.0341	2.317	4.563	10.059	8.0707	114.792
71.235	1013.2	298.4	25.2	77.4	73.2	.0380	2.585	5.091	11.223	9.5576	135.941
71.235	1013.2	298.1	24.9	76.8	81.4	.0423	2.876	5.663	12.485	11.1998	159.299
*****	*****	*****	******	******							
71.347	1014.8	299.2	26.0	78.8							
.134	1.9	.7	.7	1.3	DEVIATIONS						

TABLE 35
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11 PART 22H TEST DESCRIPTION

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 74.3 MG OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 022) INLET PRESSURE = 415 PSIA (NOMINAL).

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.53	49.9	83.6	.52	48.8	83.7	418.8	83.1	.0621
.47	50.1	82.6	.46	49.2	83.7	418.2	83.1	.0553
.42	50.4	82.6	.40	49.5	83.7	418.2	83.1	.0490
.32	50.2	82.5	.30	49.7	83.5	417.5	83.0	.0372
.27	50.2	82.3	.25	49.9	83.4	417.5	82.9	.0313
.22	50.6	82.5	.20	50.1	83.5	416.9	83.0	.0255
.14	50.8	82.6	.13	50.3	83.7	416.9	83.1	.0169
.14	50.2	82.9	.13	49.9	83.9	416.9	83.4	.0166
.22	50.1	82.7	.21	49.7	83.9	416.9	83.3	.0257
.27	50.2	82.6	.25	49.9	83.7	416.2	83.1	.0312
.32	50.1	82.1	.31	49.3	83.5	415.6	82.8	.0378
.42	49.9	81.9	.41	49.2	83.3	415.6	82.6	.0499
.46	50.1	81.6	.45	49.2	83.0	415.6	82.3	.0548
.51	49.9	81.6	.50	48.8	82.9	414.3	82.2	.0602

TABLE 35
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11 PART 22H TEST DESCRIPTION CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 74.3 MG OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 022) INLET PRESSURE = 415 PSIA NOMINAL.

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
418.8	83.1	.0621	307.445	307.445	307.445	.001	307.444
418.2	83.1	.0553	230.741	230.741	230.741	.000	230.741
418.2	83.1	.0490	186.550	186.550	186.550	.000	186.550
417.5	83.0	.0372	122.788	122.788	122.788	.000	122.788
417.5	82.9	.0313	95.958	95.958	95.958	.000	95.958
416.9	83.0	.0255	72.442	73.231	72.836	.000	72.836
416.9	83.1	.0169	43.594	43.894	43.744	.000	43.743
416.9	83.4	.0166	42.841	43.086	42.964	.000	42.963
416.9	83.3	.0257	73.064	74.178	73.621	.000	73.621
416.2	83.1	.0312	95.327	95.327	95.327	.000	95.326
415.6	82.8	.0378	124.682	124.682	124.682	.000	124.682
415.6	82.6	.0499	190.969	190.969	190.969	.000	190.969
415.6	82.3	.0548	228.216	228.216	228.216	.000	228.216
414.3	82.2	.0602	282.508	282.508	282.508	.000	282.508

TARE DIFF. PRESS = -3.40000E-05 + -4.44000E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 35
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11 PART 22H TEST DESCRIPTION

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 74.3 MG OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 022) INLET PRESSURE = 415 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE		TEMPERATURE			FLOW RATE					NET DIFFERENTIAL PRESS	
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.447	418.8	301.6	28.4	83.1	48.9	.0621	1.727	3.401	7.497	21.6155	307.444
29.402	418.2	301.6	28.4	83.1	43.5	.0553	1.536	3.025	6.669	16.2227	230.741
29.402	418.2	301.6	28.4	83.1	38.5	.0490	1.361	2.680	5.908	13.1157	186.550
29.356	417.5	301.5	28.3	83.0	29.2	.0372	1.031	2.031	4.478	8.6329	122.788
29.356	417.5	301.4	28.3	82.9	24.6	.0313	.867	1.708	3.766	6.7465	95.958
29.311	416.9	301.5	28.3	83.0	20.0	.0255	.705	1.388	3.060	5.1209	72.836
29.311	416.9	301.6	28.4	83.1	13.2	.0169	.466	.918	2.025	3.0755	43.743
29.311	416.9	301.7	28.6	83.4	13.0	.0166	.459	.903	1.992	3.0206	42.963
29.311	416.9	301.7	28.5	83.3	20.2	.0257	.712	1.402	3.090	5.1760	73.621
29.265	416.2	301.6	28.4	83.1	24.4	.0312	.861	1.696	3.739	6.7021	95.326
29.219	415.6	301.4	28.2	82.8	29.5	.0378	1.043	2.053	4.526	8.7660	124.682
29.219	415.6	301.3	28.1	82.6	39.0	.0499	1.377	2.712	5.979	13.4264	190.969
29.219	415.6	301.1	27.9	82.3	42.8	.0548	1.513	2.979	6.568	16.0452	228.216
29.128 *****	414.3 *****	301.1 *****	27.9 ******	82.2 ******	47.0	.0602	1.659	3.267	7.203	19.8623	282.508
29.304	416.8	301.5	28.3	82.9							
.067	1.0	.2	.2	.3	DEVIATIONS						

TABLE 36
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11 PART 221 TEST DESCRIPTION

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 105.2 MG OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 022) INLET PRESSURE - 1000 PSIA (NOMINAL).

FLOWMETER ONE			FLOWMETER TWO			TEST SPECIMEN INLET CONDITIONS		
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.88	49.9	76.7	.92	47.6	[illegible]	1 11.9	78.6	.0434
.78	50.2	76.3	.81	48.4	[illegible]	1 11.9	78.1	.0386
.69	50.1	78.9	.71	48.6	79.7	1 11.9	77.8	.0341
.60	51.0	78.7	.60	49.9	79.[illegible]	1 11.9	77.6	.0301
.50	49.7	78.9	.49	48.8	79.7	1 11.9	77.8	.0242
.41	50.4	7[illegible].2	.40	49.9	[illegible].3	1 11.9	78.0	.0201
.32	49.7	76.8	.30	49.2	[illegible].1	1 15.9	78.4	.0151
.27	49.9	77.[illegible]	.26	49.3	[illegible].4	1 11.9	78.8	.0130
.22	49.9	78.4	.21	49.3	[illegible].3	1 15.9	79.7	.0105
.15	50.2	79.6	.14	49.9	81.5	1 15.9	80.5	.0071
.15	50.2	8[illegible].3	.14	49.9	[illegible].4	1 15.9	81.1	.0071
.22	50.8	8[illegible].3	.20	50.3	81.9	1 15.9	81.1	.0105
.26	50.4	80.1	.25	49.9	[illegible].9	1 15.9	81.0	.0125
.32	50.4	79.7	.31	49.9	81.8	1 15.9	80.8	.0156
.42	50.1	78.9	.41	49.3	81.6	1 15.9	80.3	.0202
.50	50.4	78.2	.49	49.5	81.4	1 15.9	79.8	.0244
.60	50.2	77.2	.60	49.2	8[illegible].9	1 15.9	79.1	.0292
.69	50.2	78.9	.70	48.8	[illegible].1	1 11.9	78.0	.0340
.78	50.2	75.4	.81	48.4	79.3	1 11.9	77.2	.0386
.87	50.1	74.4	.91	47.8	78.8	1 11.9	76.6	.0431

TABLE 36
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11 PART 221 TEST DESCRIPTION

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 105.2 MG OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 022) INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1011.9	78.6	.434	168.453	168.453	168.453	=0.000	168.453
1011.9	78.1	.385	143.232	143.232	143.232	=0.000	143.232
1011.9	77.8	.341	121.479	121.479	121.479	=0.000	121.480
1011.9	77.6	.303.1	102.564	102.564	102.564	=0.000	102.564
1011.9	77.8	.0242	77.29	77.659	77.474	=0.000	77.474
1011.9	78.0	.0201	60.449	60.950	60.699	=0.000	60.700
1015.9	78.4	.151	43.594	43.781	43.687	=0.000	43.687
1011.9	78.8	.013	36.071	36.182	36.126	=0.000	36.127
1015.9	79.7	.1 5	27.796	27.856	27.826	=0.000	27.826
1015.9	80.5	.0171	17.843	17.838	17.840	=0.000	17.840
1015.9	81.1	.0171	17.786	17.952	17.868	=0.000	17.869
1015.9	81.1	.01 5	27.622	27.799	27.711	=0.000	27.711
1015.9	81.0	.125	34.161	34.343	34.252	=0.000	34.252
1015.9	80.8	.0156	44.404	44.241	44.322	=0.000	44.323
1015.9	80.3	.0222	61.075	61.580	61.328	=0.000	61.328
1015.9	79.8	.1244	77.538	77.974	77.756	=0.000	77.756
1015.9	79.1	.1292	99.096	99.096	99.096	=0.000	99.096
1011.9	78.0	.0341	121.164	121.164	121.164	=0.000	121.164
1011.9	77.2	.0385	143.863	143.863	143.863	=0.000	143.863
1011.9	76.6	.0431	170.029	170.029	170.029	=0.000	170.029

TARE DIFF. PRESS = -1.64000E-04 + -1.26930E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 36
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11 PART 221 TEST DESCRIPTION

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 105.2 MG OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 022) INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE		TEMPERATURE			FLOW RATE				NET DIFFERENTIAL PRESS	
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
71.144	1011.9	299.1	25.9	78.6	83.3	.0434	2.942	5.792	12.770	11.8434	168.453
71.144	1011.9	298.8	25.6	78.1	74.1	.0386	2.618	5.156	11.366	10.0702	143.232
71.144	1011.9	298.6	25.4	77.8	65.6	.0341	2.315	4.558	10.049	8.5409	121.480
71.144	1011.9	298.6	25.3	77.6	57.9	.0301	2.043	4.023	8.869	7.2110	102.564
71.144	1011.9	298.6	25.4	77.8	46.5	.0242	1.642	3.234	7.130	5.4470	77.474
71.144	1011.9	298.7	25.5	78.1	38.5	.0201	1.360	2.678	5.905	4.2676	60.700
71.423	1015.9	299.0	25.8	78.4	29.1	.0151	1.027	2.022	4.459	3.0715	43.687
71.144	1011.9	299.2	26.0	78.8	24.9	.0130	.879	1.730	3.815	2.5400	36.127
71.423	1015.9	299.6	26.5	79.7	20.2	.0105	.712	1.401	3.090	1.9564	27.826
71.423	1015.9	300.1	27.0	80.5	13.7	.0071	.484	.952	2.100	1.2543	17.840
71.423	1015.9	300.5	27.3	81.1	13.7	.0071	.483	.951	2.097	1.2563	17.869
71.423	1015.9	300.4	27.3	81.1	20.1	.0105	.709	1.396	3.079	1.9483	27.711
71.423	1015.9	300.4	27.2	81.0	23.9	.0125	.846	1.665	3.671	2.4082	34.252
71.423	1015.9	300.2	27.1	80.8	29.9	.0156	1.055	2.078	4.582	3.1162	44.323
71.423	1015.9	300.0	26.8	80.3	38.9	.0202	1.373	2.703	5.959	4.3118	61.328
71.423	1015.9	299.7	26.6	79.8	46.9	.0244	1.656	3.261	7.188	5.4668	77.756
71.423	1015.9	299.3	26.1	79.1	56.3	.0292	1.987	3.912	8.625	6.9672	99.096
71.144	1011.9	298.7	25.6	78.0	65.4	.0340	2.309	4.546	10.022	8.5187	121.164
71.144	1011.9	298.3	25.1	77.2	74.1	.0385	2.617	5.153	11.360	10.1146	143.863
71.144 *****	1011.9 *****	297.9 *****	24.8 ******	76.6 ******	83.0	.0431	2.930	5.770	12.720	11.9543	170.029
71.283	1013.9	299.3	26.1	79.0							
.139	2.0	.7	.7	1.2	DEVIATIONS						

TABLE 37
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11 PART 2PJ TEST DESCRIPTION

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 105.2 MG OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 022) INLET PRESSURE = 415 PSIA (NOMINAL).

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.51	50.1	71.6	.51	49.2	71.9	419.5	71.3	.0600
.41	50.3	71.6	.41	49.7	71.9	418.2	71.3	.0493
.31	50.3	71.6	.31	49.9	72.	418.2	71.3	.0371
.26	50.3	71.7	.25	49.9	72.2	417.5	71.4	.0310
.21	49.9	71.9	.20	49.6	72.3	417.5	71.6	.0246
.14	49.9	71.1	.14	49.7	72.5	417.5	71.8	.0166
.14	49.7	71.4	.13	49.3	72.8	417.5	72.1	.0164
.22	50.3	71.3	.21	49.9	72.8	417.5	72.1	.0258
.27	50.1	71.2	.26	49.5	72.8	416.9	72.0	.0318
.31	49.7	71.1	.31	49.2	72.9	416.9	72.0	.0368
.41	50.3	71.9	.41	49.5	72.7	416.2	71.8	.0492
.50	50.5	71.4	.50	49.5	72.5	415.6	71.7	.0604

TABLE 37

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11 PART 22J TEST DESCRIPTION

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 105.2 MG OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 022) INLET PRESSURE = 415 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
419.5	71.3	.706 0	290.81[illegible]	29[illegible].810	290.[illegible]1[illegible]	.000	290.809
418.2	71.3	. 493	192.713	192.713	192.713	.000	192.712
418.2	71.3	. 371	124.678	124.678	124.678	.000	124.678
417.5	71.4	.231	96.515	96.515	96.515	.000	96.514
417.5	71.6	.1246	7 .665	71.516	71.[illegible]91	.000	71.090
417.5	71.8	.1[illegible]66	43.761	43.91[illegible]	43.836	.000	43.835
417.5	72.1	. 164	43.355	43.564	43.459	-0.000	43.459
417.5	72.1	. 258	75.159	75.946	75.553	.000	75.552
416.9	72.[illegible]	. 31[illegible]	1[illegible].312	10[illegible].312	100.312	.000	100.312
416.9	72.	. 36[illegible]	123.412	123.412	123.412	.000	123.412
416.2	71.8	. 492	193.[illegible]29	193. 29	193.[illegible]29	.000	193.029
415.6	71.7	.806 4	3[illegible]2.835	3[illegible]2.835	302.835	.000	302.834

TARE DIFF. PRESS = -3.4[illegible]000E-05 + -4.4400[illegible]-04 (ACF) + 1.5[illegible]933E-01 (ACF)**2 + 0 (ACFM)**3

TABLE 37

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11 PART 2PJ TEST DESCRIPTION: CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 105.2 MG OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 022) INLET PRESSURE = 415 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	SCFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.493	419.5	295.0	21.8	71.3	40.4	.0600	1.708	3.362	7.412	20.4459	290.809
29.402	418.2	295.0	21.8	71.3	39.6	.0493	1.398	2.753	6.069	13.5490	192.712
29.402	418.2	295.0	21.8	71.3	29.8	.0371	1.054	2.075	4.575	8.7657	124.678
29.356	417.5	295.1	21.9	71.4	24.9	.0310	.878	1.729	3.812	6.7856	96.514
29.356	417.5	295.1	22.	71.6	19.7	.0246	.697	1.372	3.024	4.9981	71.090
29.356	417.5	295.3	22.1	71.8	13.3	.0166	.470	.925	2.038	3.0819	43.835
29.356	417.5	295.4	22.1	72.1	13.1	.0164	.464	.913	2.013	3.0555	43.459
29.356	417.5	295.4	22.3	72.1	20.7	.0258	.730	1.438	3.170	5.3118	75.552
29.311	416.9	295.4	22.2	72.0	25.4	.0318	.898	1.768	3.898	7.0526	100.312
29.311	416.9	295.4	22.2	72.0	29.4	.0368	1.039	2.045	4.509	8.6767	123.412
29.265	416.2	295.3	22.1	71.8	39.3	.0492	1.388	2.734	6.027	13.5713	193.029
29.219	415.6	295.2	22.1	71.7	48.2	.0604	1.702	3.351	7.387	21.2914	302.834
*****	*****	*****	******	******							
29.349	417.4	295.2	22.1	71.7							
.048	.7	.1	.1	.3	DEVIATIONS						

TABLE 38
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 12 PART 28F

TEST DESCRIPTION: CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED IN THE NORMAL FLOW DIRECTION (S/N SIDE UPSTREAM) AFTER THE ADDITION OF 5.2 MG OF SYNTHETIC CONTAMINANT AND AFTER 2 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 028) INLET PRESSURE = 1000 PSIA (NOMINAL).

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.84	49.7	64.6	.91	47.6	69.6	1011.9	67.1	.0420
.76	50.4	63.8	.81	48.5	68.9	1011.9	66.3	.0382
.67	50.2	63.1	.71	48.7	68.4	1 11.9	65.7	.0334
.58	50.2	63.1	.61	49.1	68.1	1 11.9	65.6	.0290
.49	50.6	63.1	.50	49.7	68.1	1 11.9	65.5	.0246
.40	50.2	63.3	.40	49.5	68.1	1 11.9	65.7	.0198
.30	50.4	63.9	.32	49.9	68.5	1011.9	66.2	.0150
.26	50.2	64.3	.26	49.9	68.7	1011.9	66.5	.0127
.21	50.2	64.8	.20	49.9	69.0	1011.9	66.9	.0102
.14	50.4	66.8	.14	50.1	69.4	1007.9	67.6	.0069
.14	50.2	65.6	.14	49.9	70.0	1011.9	68.3	.0069
.22	50.4	66.5	.22	50.1	69.9	1011.9	68.2	.0108
.26	50.4	66.3	.25	49.9	69.9	1011.9	68.1	.0127
.30	50.6	65.9	.30	50.1	69.8	1011.9	67.9	.0151
.40	50.4	65.1	.40	49.9	69.4	1007.9	67.3	.0199
.49	50.4	64.3	.50	49.5	69.1	1007.9	66.7	.0245
.58	49.9	63.7	.60	48.5	68.6	1007.9	66.1	.0286
.67	49.7	62.7	.71	48.3	67.8	1007.9	65.2	.0335
.75	49.7	62.0	.80	47.8	67.1	1007.9	64.6	.0376
.87	49.7	61.3	.91	47.4	66.4	1007.9	63.9	.0429

TABLE 38
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 12 PART 28F

TEST DESCRIPTION CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED IN THE NORMAL FLOW DIRECTION (S/N SIDE UPSTREAM) AFTER THE ADDITION OF 5.2 MG OF SYNTHETIC CONTAMINANT AND AFTER 2 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 028) INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1011.9	97.1	.342	151.618	151.618	151.618	-0.000	151.618
1011.9	96.3	.302	133.941	133.941	133.941	-0.000	133.942
1011.9	95.7	.1934	112.477	112.477	112.477	-0.000	112.477
1011.9	95.6	.0295	94.169	94.169	94.169	-0.000	94.170
1011.9	95.5	.0245	76.285	76.493	76.390	-0.000	76.390
1011.9	95.7	.199	57.987	58.501	58.244	-0.000	58.244
1011.9	96.2	.150	42.122	42.087	42.105	-0.000	42.105
1011.9	96.5	.121	34.415	34.564	34.490	-0.000	34.491
1011.9	96.9	.0912	26.363	26.394	26.378	-0.000	26.379
1007.9	97.-	.0 69	16.455	16.527	16.491	-0.000	16.491
1011.9	96.7	.0.09	16.339	16.413	16.376	-0.000	16.376
1011.9	98.2	.01 4	28.043	28.175	28.109	-0.000	28.110
1011.9	98.1	.127	33.953	34.161	34.057	-0.000	34.057
1011.9	97.9	.0151	41.949	42.087	42.018	-0.000	42.018
1007.9	97.7	.199	57.861	58.185	58.023	-0.000	58.023
1007.9	96.7	.245	75.285	75.546	75.415	-0.000	75.416
1007.9	95.1	.286	92.275	92.275	92.275	-0.000	92.276
1007.9	95.2	.335	111.340	111.846	111.846	-0.000	111.846
1007.9	94.0	.376	129.838	129.838	129.838	-0.000	129.838
1007.9	93.9	.429	15 .355	15 .356	150.355	-0.000	150.356

DIFF. PRESS = -1.64000E-04 + -1.26930E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 38
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 12 PART 2PF

TEST DESCRIPTION: CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED IN THE NORMAL FLOW DIRECTION (S/N SIDE UPSTREAM) AFTER THE ADDITION OF 5.2 MG OF SYNTHETIC CONTAMINANT AND AFTER 2 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 028) INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE		TEMPERATURE			FLOW RATE					NET DIFFERENTIAL PRESS	
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN_2 KG/HR	GN_2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
71.144	1011.9	292.7	19.4	67.1	83.3	.0060	2.907	5.724	12.620	10.6598	151.618
71.144	1011.9	292.2	19.1	66.3	71..	.38..	2.648	5.215	11.496	9.4170	133.942
71.144	1011.9	291.9	18.7	65.7	58.7	.334	2.321	4.570	10.074	7.9080	112.477
71.144	1011.9	291.9	18.8	66.6	7.6	.209	2.014	3.965	8.742	6.6208	94.170
71.144	1011.9	291.8	18.6	65.5	48.4	.240	1.711	3.367	7.422	5.3707	76.390
71.144	1011.9	291.8	18.7	65.7	38.8	.196	1.372	2.701	5.956	4.0950	58.244
71.144	1011.9	292.2	19..	66.2	29.5	.0151	1.063	2.954	4.529	2.9603	42.105
71.144	1011.9	292.3	19.2	66.5	25..	.0127	.881	1.735	3.826	2.4249	34.491
71.144	1011.9	292..	19.4	66.9	2 .1	.0112	.779	1.397	3.080	1.8546	26.379
70.865	1007.9	292.9	19.8	67.6	13.5	.0069	.477	.939	2.069	1.1595	16.491
71.144	1011.9	293.3	2 .2	68.3	13.4	.0068	.474	.934	2.059	1.1514	16.376
71.144	1011.9	293.3	2..1	68.2	21.2	.0108	.748	1.473	3.248	1.9763	28.110
71.144	1011.9	293.2	2..1	68.1	24.8	.0127	.875	1.722	3.797	2.3945	34.057
71.144	1011.9	293.1	19.9	67.9	29.5	.0151	1.041	2.050	4.520	2.9542	42.018
70.865	1007.9	292.8	19.6	67.3	39.9	.0199	1.373	2.703	5.959	4.0795	58.023
70.865	1007.9	292.4	19.3	66.7	48.1	.0247	1.694	3.335	7.352	5.3022	75.416
70.865	1007.9	292.1	19..	66.1	57..	.0296	1.978	3.894	8.586	6.4876	92.276
70.865	1007.9	291.9	18.8	65.8	66.6	.0345	2.318	4.563	10.064	7.8636	111.846
70.865	1007.9	291.3	18.1	64.6	73.5	.0376	2.607	5.134	11.318	9.1285	129.838
70.865	1007.9	291.9	17.7	63.9	86.2	.0429	2.973	5.854	12.907	10.5711	150.356
*****	*****	*****	******	******							
71.046	1010.5	292.3	19.2	66.5							
.127	1.8	.5	.5	1.0	DEVIATIONS						

TABLE 39
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 12 PART 296

TEST DESCRIPTION: CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED IN THE NORMAL FLOW DIRECTION (S/N SIDE UPSTREAM) AFTER THE ADDITION OF 5.2 MG OF SYNTHETIC CONTAMINANT AND AFTER 2 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 028) INLET PRESSURE = 415 PSIA (NOMINAL).

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.50	50.4	71.7	.50	49.5	72.1	414.3	71.4	.0603
.40	50.4	71.6	.40	49.9	72.1	413.7	71.3	.0490
.30	50.6	71.7	.30	50.1	72.2	413.7	71.4	.0369
.26	49.7	71.7	.26	49.1	72.2	413.0	71.4	.0311
.21	50.2	71.8	.21	49.9	72.3	413.(	71.5	.0247
.14	50.2	71.8	.14	49.9	72.4	413.0	71.7	.0168
.14	49.9	71.1	.14	49.5	72.6	413.0	71.8	.0167
.21	50.1	71.(	.21	49.7	72.6	412.4	71.8	.0256
.26	50.1	71.8	.26	49.7	72.4	412.4	71.6	.0308
.31	50.4	71.8	.31	49.9	72.3	411.7	71.4	.0374
.40	50.2	71.9	.40	49.5	72.2	411.1	71.2	.0489
.49	50.2	71.2	.50	49.1	71.9	410.4	71.0	.0600

TABLE 39
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 1P PART 2&6 TEST DESCRIPTION CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED IN THE NORMAL FLOW DIRECTION (S/N SIDE UPSTREAM) AFTER THE ADDITION OF 5.2 MG OF SYNTHETIC CONTAMINANT AND AFTER 2 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 028) INLET PRESSURE = 415 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
414.2	71.4	.693	259.466	259.466	259.466	.000	259.465
413.7	71.3	.469	174.24	174.24	174.24	.000	174.239
413.7	71.4	.309	114.267	114.266	114.266	.000	114.265
413.0	71.4	.311	90.[illegible]	90.[illegible]	90.326	.000	90.319
413.0	71.5	.247	66.[illegible]	66.[illegible]	66.149	.000	66.149
413.0	71.7	.168	41.[illegible]	41.[illegible]	41.[illegible]	.000	41.099
413.0	71.9	.127	40.[illegible]	40.[illegible]	40.608	.000	40.607
412.4	71.9	.255	69.395	69.759	69.578	.000	69.577
412.4	71.6	.[illegible]	89.[illegible]	89.[illegible]	89.534	.000	89.533
411.7	71.4	.374	117.422	117.422	117.422	.000	117.422
411.1	71.2	.469	175.187	175.187	175.187	.000	175.186
410.4	71.[illegible]	.660	259.781	259.781	259.781	.000	259.781

TARE DIFF. PRESS = -3.4000E-05 + -4.4400E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 39
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST U SEQ 12 PART PUB TEST DESCRIPTION

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED IN THE NORMAL FLOW DIRECTION (S/N SIDE UPSTREAM) AFTER THE ADDITION OF 5.2 MG OF SYNTHETIC CONTAMINANT AND AFTER 2 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 028). INLET PRESSURE = 415 PSIA

TEST SPECIMEN INLET CONDITIONS

PRESSURE		TEMPERATURE			FLOW RATE					NET DIFFERENTIAL PRESS (NOMINAL)	
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	CFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.128	414.5	295.	21.9	71.4	60.0	.0603	1.644	3.339	7.354	18.2422	259.465
29.083	413.1	295.	21.9	71.3	38.9	.0349	1.375	2.707	5.967	12.2502	174.239
29.083	413.1	295.1	21.9	71.4	27.3	.0244	1.035	2.038	4.492	8.0337	114.265
29.037	413.	295.1	21.9	71.4	22.1	.0198	.871	1.714	3.779	6.3501	90.319
29.037	413.	295.1	22.	71.5	19.6	.0176	.692	1.362	3.005	4.6507	66.149
29.037	413.	295.2	22.1	71.7	13.4	.0120	.479	.928	2.047	2.8895	41.099
29.037	413.	295.3	22.1	71.8	13.2	.0117	.468	.921	2.031	2.8550	40.607
28.992	412.4	295.3	22.1	71.8	20.2	.0180	.715	1.408	3.104	4.8918	69.577
28.992	412.4	295.2	22.	71.6	24.4	.0218	.962	1.896	3.740	6.2948	89.533
28.946	411.7	295.1	21.9	71.4	29.0	.0374	1.045	2.058	4.537	8.2556	117.422
28.900	411.1	295.	21.8	71.2	37.0	.0469	1.384	2.980	5.922	12.3168	175.186
28.855	410.4	294.9	21.7	71.	47.3	.0601	1.671	3.290	7.254	18.2644	259.781
*****	*****	*****	******	******							
29.011	412.9	295.1	21.9	71.							
.061	.9	.1	.1	.2	DEVIATIONS						

TABLE 40
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 12 PART 28I

TEST DESCRIPTION: CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED IN THE NORMAL FLOW DIRECTION (S/N SIDE UP-STREAM) AFTER THE ADDITION OF 5.2 MG OF SYNTHETIC CONTAMINANT AND AFTER 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 028) INLET PRESSURE = 1000 PSIA (NOMINAL).

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.86	49.9	55.8	.91	47.6	61.6	1007.9	58.7	.0427
.76	50.1	55.2	.81	48.3	60.8	1007.9	58.0	.0382
.67	50.1	54.9	.70	48.5	60.5	1007.9	57.7	.0335
.58	50.8	55.0	.60	49.5	60.5	1007.9	57.7	.0295
.49	50.4	55.4	.50	49.5	60.7	1007.9	58.0	.0246
.40	50.4	56.0	.40	49.7	61.0	1007.9	58.5	.0198
.30	50.1	56.5	.30	49.5	61.3	1007.9	58.9	.0147
.26	49.7	57.0	.25	49.3	61.6	1007.9	59.3	.0125
.21	49.7	57.5	.20	49.3	62.0	1007.9	59.8	.0101
.14	50.4	58.6	.13	50.2	62.7	1007.9	60.6	.0067
.14	50.4	60.1	.13	50.2	63.6	1007.9	61.9	.0067
.21	49.9	60.3	.21	49.5	63.7	1007.9	62.0	.0104
.25	49.7	60.1	.25	49.3	63.8	1007.9	62.0	.0122
.31	50.1	59.9	.30	49.5	63.7	1007.9	61.8	.0150
.40	50.2	59.1	.40	49.5	63.4	1007.9	61.3	.0198
.49	50.2	58.1	.50	49.3	63.0	1007.9	60.6	.0246
.58	50.1	57.5	.60	48.9	62.5	1007.9	60.0	.0290
.67	49.9	56.8	.71	48.5	61.9	1007.9	59.3	.0337
.76	50.1	56.1	.81	48.3	61.3	1007.9	58.7	.0382
.87	50.4	55.4	.91	48.3	60.5	1007.9	57.9	.0435

TABLE 40
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 12 PART 28I

TEST DESCRIPTION CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA ACQUIRED IN THE NORMAL FLOW DIRECTION (S/N SIDE UPSTREAM) AFTER THE ADDITION OF 5.2 MG OF SYNTHETIC CONTAMINANT AND AFTER 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 028) INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1007.9	58.7	.0427	119.044	119.044	119.044	-0.000	119.044
1007.9	58.0	.0382	104.506	104.506	104.506	-0.000	104.506
1007.9	57.7	.0335	88.200	88.704	88.452	-0.000	88.452
1007.9	57.7	.0295	74.543	74.798	74.670	-0.000	74.670
1007.9	58.0	.0246	59.232	59.627	59.429	-0.000	59.430
1007.9	58.5	.0198	44.863	45.089	44.976	-0.000	44.976
1007.9	58.9	.0147	31.172	31.283	31.228	-0.000	31.228
1007.9	59.3	.0125	25.719	25.756	25.738	-0.000	25.738
1007.9	59.8	.0101	19.686	19.665	19.675	-0.000	19.676
1007.9	60.6	.0067	12.028	12.040	12.034	-0.000	12.034
1007.9	61.9	.0067	11.912	12.040	11.976	-0.000	11.976
1007.9	62.0	.0104	20.266	20.412	20.339	-0.000	20.339
1007.9	62.0	.0122	24.849	25.009	24.929	-0.000	24.929
1007.9	61.8	.0150	31.984	32.147	32.066	-0.000	32.066
1007.9	61.3	.0198	44.863	44.773	44.818	-0.000	44.818
1007.9	60.6	.0246	58.980	58.995	58.988	-0.000	58.988
1007.9	60.0	.0290	73.038	72.901	72.970	-0.000	72.970
1007.9	59.3	.0337	89.076	89.020	89.048	-0.000	89.048
1007.9	58.7	.0382	104.190	104.190	104.190	-0.000	104.190
1007.9	57.9	.0435	122.837	122.837	122.837	-0.000	122.837

TARE DIFF. PRESS = -1.64000E-04 + -1.26930E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 40
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 12 PART 281

TEST DESCRIPTION: CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED IN THE NORMAL FLOW DIRECTION (S/N SIDE UPSTREAM) AFTER THE ADDITION OF 5.2 MG OF SYNTHETIC CONTAMINANT AND AFTER 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 028) INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS									NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE					
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN_2 KG/HR	GN_2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
70.865	1007.9	288.0	14.8	58.7	84.7	.0427	2.992	5.892	12.990	8.3696	119.044
70.865	1007.9	287.6	14.4	58.0	75.8	.0382	2.677	5.271	11.620	7.3475	104.506
70.865	1007.9	287.4	14.3	57.7	66.6	.0335	2.352	4.632	10.211	6.2188	88.452
70.865	1007.9	287.5	14.3	57.7	58.6	.0295	2.068	4.074	8.979	5.2499	74.670
70.865	1007.9	287.6	14.5	58.0	48.9	.0246	1.727	3.400	7.496	4.1783	59.430
70.865	1007.9	287.9	14.7	58.5	39.3	.0198	1.387	2.730	6.019	3.1622	44.976
70.865	1007.9	288.1	14.9	58.9	29.2	.0147	1.032	2.036	4.480	2.1955	31.228
70.865	1007.9	288.3	15.2	59.3	24.8	.0125	.874	1.721	3.795	1.8095	25.738
70.865	1007.9	288.6	15.4	59.8	20.0	.0101	.708	1.394	3.072	1.3833	19.676
70.865	1007.9	289.1	15.9	60.6	13.2	.0067	.466	.911	2.022	.8461	12.034
70.865	1007.9	289.8	16.6	61.9	13.2	.0067	.465	.915	2.017	.8420	11.976
70.865	1007.9	289.8	16.7	62.0	20.4	.0104	.722	1.422	3.134	1.4300	20.339
70.865	1007.9	289.8	16.6	62.0	24.1	.0122	.849	1.673	3.688	1.7527	24.929
70.865	1007.9	289.7	16.6	61.8	29.6	.0150	1.046	2.061	4.543	2.2545	32.066
70.865	1007.9	289.4	16.3	61.3	39.0	.0198	1.377	2.711	5.977	3.1510	44.818
70.865	1007.9	289.0	15.9	60.6	48.6	.0246	1.718	3.382	7.456	4.1473	58.988
70.865	1007.9	288.7	15.5	60.0	57.3	.0290	2.023	3.984	8.783	5.1303	72.970
70.865	1007.9	288.3	15.2	59.3	66.8	.0337	2.358	4.643	10.236	6.2607	89.048
70.865	1007.9	288.0	14.8	58.7	75.7	.0382	2.673	5.263	11.603	7.3253	104.190
70.865 *****	1007.9 *****	287.6 *****	14.4 ******	57.9 ******	86.4	.0435	3.050	6.005	13.240	8.6363	122.837
70.865	1007.9	288.5	15.4	59.6							
.000	.0	.7	.7	1.3	DEVIATIONS						

TABLE 41
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 12 PART 28J TEST DESCRIPTION

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED IN THE NORMAL FLOW DIRECTION (S/N SIDE UPSTREA) AFTER THE ADDITION OF 5.2 MG OF SYNTHETIC CONTAMINANT AND AFTER 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 028) INLET PRESSURE = 415 PSIA (NOMINAL).

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.59	50.4	69.1	.61	49.3	69.8	414.8	69.5	.0718
.50	50.8	69.1	.50	49.9	69.9	414.2	69.5	.0606
.40	50.4	69.2	.40	49.9	70.0	413.5	69.6	.0487
.31	50.2	69.4	.31	49.9	70.2	413.5	69.8	.0374
.26	49.9	69.7	.25	49.5	70.4	413.5	70.0	.0307
.21	50.1	69.9	.20	49.9	70.6	413.5	70.2	.0250
.14	50.1	70.2	.13	49.9	70.8	413.5	70.5	.0165
.14	49.9	70.7	.13	49.5	71.2	413.5	70.9	.0163
.21	49.7	70.6	.21	49.3	71.2	413.5	70.9	.0251
.26	50.2	70.6	.25	49.9	71.2	413.5	70.9	.0309
.31	50.1	70.6	.31	49.5	71.3	412.9	70.9	.0371
.41	50.2	70.4	.41	49.5	71.4	412.9	70.9	.0491
.50	50.1	70.3	.50	49.2	71.3	412.2	70.8	.0601
.60	50.6	70.4	.60	49.3	71.3	411.6	70.8	.0725

TABLE 41
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 12 PART 28J

TEST DESCRIPTION CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA ACQUIRED IN THE NORMAL FLOW DIRECTION (S/N SIDE UPSTREA..) AFTER THE ADDITION OF 5.2 MG OF SYNTHETIC CONTAMINANT AND AFTER 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 028) INLET PRESSURE = 415.PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
414.8	69.5	.0718	266.831	266.831	266.831	.001	266.830
414.2	69.5	.0606	185.393	185.393	185.393	.000	185.392
413.5	69.6	.0487	129.838	129.838	129.838	.000	129.837
413.5	69.8	.0374	89.505	89.435	89.470	.000	89.469
413.5	70.0	.0307	68.853	69.233	69.043	.000	69.042
413.5	70.2	.0250	51.668	52.188	51.928	.000	51.927
413.5	70.5	.0165	30.998	31.072	31.035	-0.000	31.034
413.5	70.9	.0163	30.650	30.899	30.774	-0.000	30.774
413.5	70.9	.0251	52.798	53.135	52.966	.000	52.966
413.5	70.9	.0309	69.103	69.549	69.326	.000	69.325
412.9	70.9	.0371	88.755	89.119	88.937	.000	88.936
412.9	70.9	.0491	132.995	132.995	132.995	.000	132.994
412.2	70.8	.0601	186.024	186.024	186.024	.000	186.023
411.6	70.8	.0725	266.831	266.831	266.831	.001	266.830

TARE DIFF. PRESS = -3.40000E-05 + -4.44000E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 41
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 12 PART 28J TEST DESCRIPTION

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA ACQUIRED IN THE NORMAL FLOW DIRECTION (S/N SIDE UPSTREAM) AFTER THE ADDITION OF 5.2 MG OF SYNTHETIC CONTAMINANT AND AFTER 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 028) INLET PRESSURE = 415 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.165	414.6	294.0	20.8	69.5	57.5	.0718	2.030	3.990	8.810	18.7600	266.830
29.119	414.4	294.1	20.8	69.5	48.4	.0606	1.708	3.364	7.415	13.0344	185.392
29.073	413.8	294.1	20.9	69.6	38.8	.0487	1.371	2.700	5.952	9.1285	129.837
29.073	413.8	294.2	21.0	69.8	29.8	.0374	1.053	2.073	4.571	6.2903	89.469
29.073	413.8	294.3	21.1	70.0	24.5	.0307	.864	1.706	3.751	4.8541	69.042
29.073	413.8	294.4	21.2	70.2	19.9	.0250	.702	1.381	3.046	3.6508	51.927
29.073	413.8	294.5	21.4	70.5	13.1	.0165	.463	.912	2.011	2.1819	31.034
29.073	413.8	294.8	21.6	70.9	13.0	.0163	.457	.901	1.986	2.1636	30.774
29.073	413.8	294.8	21.6	70.9	20.0	.0251	.706	1.389	3.063	3.7239	52.966
29.073	413.8	294.8	21.6	70.9	24.5	.0309	.866	1.705	3.761	4.8740	69.325
29.028	412.7	294.8	21.6	70.9	29.4	.0371	1.039	2.049	4.519	6.2528	88.936
29.028	412.7	294.8	21.6	70.9	39.0	.0491	1.377	2.715	5.979	9.3504	132.994
28.982	412.6	294.7	21.6	70.8	47.7	.0601	1.684	3.319	7.319	13.0787	186.023
28.937	411.8	294.7	21.6	70.8	57.4	.0725	2.028	3.996	8.801	18.7600	266.830
*****	*****	*****	******	******							
29.060	413.3	294.5	21.3	70.4							
.038	.5	.3	.3	.5	DEVIATIONS						

TABLE 42
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 12 PART 28L

TEST DESCRIPTION CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED IN THE NORMAL FLOW DIRECTION (S/N SIDE UPSTREAM, AFTER THE ADDITION OF 10.2 MG OF SYNTHETIC CONTAMINANT AND AFTER 20 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 028) INLET PRESSURE = 1000 PSIA (NOMINAL).

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.86	50.6	64.7	.90	47.9	69.8	1011.9	67.3	.0429
.78	50.2	63.5	.80	48.3	68.2	1011.9	65.8	.0384
.69	50.1	63.1	.70	48.5	67.6	1011.9	65.4	.0339
.60	49.7	62.9	.60	48.5	67.6	1011.9	65.2	.0291
.50	49.9	62.5	.50	48.9	67.6	1011.9	65.0	.0246
.40	50.0	62.3	.40	49.9	67.7	1011.9	65.3	.0199
.32	49.9	63.5	.30	49.3	68.3	1011.9	65.9	.0152
.26	49.7	64.5	.25	49.1	68.8	1011.9	66.7	.0126
.21	50.4	65.8	.20	50.1	69.3	1011.9	67.5	.0104
.14	50.2	65.7	.13	49.9	69.8	1011.9	67.8	.0069
.14	49.9	68.0	.13	49.5	70.7	1011.9	69.4	.0068
.22	50.2	67.9	.21	49.9	71.0	1011.9	69.4	.0105
.27	50.1	67.9	.26	49.9	71.1	1011.9	69.3	.0129
.32	50.1	67.3	.31	49.5	71.0	1011.9	69.1	.0153
.41	49.9	66.7	.40	49.3	70.0	1011.9	68.6	.0199
.50	49.9	66.7	.50	48.9	70.1	1011.9	67.9	.0246
.60	49.9	65.0	.60	48.7	69.6	1011.9	67.3	.0293
.69	49.9	64.4	.70	48.3	69.1	1011.9	66.8	.0338
.78	49.9	63.9	.81	48.3	68.2	1007.9	66.0	.0386
.87	50.4	63.2	.91	48.3	67.6	1007.9	65.4	.0435

TABLE 42
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED IN THE NORMAL FLOW DIRECTION (S/N SIDE UPSTREAM, AFTER THE ADDITION OF 10.2 MG OF SYNTHETIC CONTAMINANT AND AFTER 20 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES.

TEST NUMBER 12 PART 28L TEST DESCRIPTION: TEST SPECIMEN (S/N 028) INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1011.9	67.3	.0429	158.971	158.971	158.971	-0.000	158.971
1011.9	65.8	.0384	133.688	133.688	133.688	-0.000	133.688
1011.9	65.4	.0339	109.668	109.668	109.668	-0.000	109.668
1011.9	65.2	.0291	86.441	86.913	86.678	-0.000	86.677
1011.9	65.0	.0246	66.682	67.002	66.842	-0.000	66.842
1011.9	65.3	.0199	48.361	48.671	48.516	-0.000	48.516
1011.9	65.9	.0152	32.659	32.660	32.660	-0.000	32.660
1011.9	66.7	.0124	25.011	25.022	25.016	-0.000	25.017
1011.9	67.5	.0104	18.811	18.891	18.851	-0.000	18.851
1011.9	67.8	.0069	10.931	10.888	10.909	-0.000	10.909
1011.9	69.4	.0068	10.700	10.829	10.764	-0.000	10.765
1011.9	69.4	.0105	19.043	19.177	19.110	-0.000	19.110
1011.9	69.3	.0129	25.474	25.596	25.535	-0.000	25.535
1011.9	69.1	.0153	32.659	32.833	32.746	-0.000	32.746
1011.9	68.6	.0199	48.129	48.039	48.084	-0.000	48.084
1011.9	67.9	.0246	66.557	66.686	66.621	-0.000	66.622
1011.9	67.3	.0293	87.564	87.861	87.713	-0.000	87.713
1011.9	66.8	.0338	109.660	109.668	109.668	-0.000	109.668
1007.9	66.0	.0386	134.952	134.952	134.952	-0.000	134.952
1007.9	65.4	.0435	164.028	164.028	164.028	-0.000	164.028

TARE DIFF. PRESS = -1.64000E-04 + -1.26930E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 42
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED IN THE NORMAL FLOW DIRECTION (S/N SIDE UPSTREAM) AFTER THE ADDITION OF 10.2 MG OF SYNTHETIC CONTAMINANT AND AFTER 20 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES.

TEST NUMBER 14 PART 28L TEST DESCRIPTION: TEST SPECIMEN (S/N 028) INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS									NET DIFFERENTIAL PRESS.	
PRESSURE		TEMPERATURE			FLOW RATE					
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN_2 KG/HR	GN_2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
71.144	1011.7	292.8	19.6	67.3	84.0	.0429	2.967	5.841	12.878	11.1768	158.971
71.144	1011.7	292.0	18.8	65.8	75.5	.0384	2.667	5.254	11.579	9.3992	133.688
71.144	1011.7	291.7	18.5	65.4	66.6	.0339	2.352	4.634	10.211	7.7104	109.668
71.144	1011.7	291.6	18.5	65.2	57.2	.0291	2.019	3.976	8.765	6.0940	86.677
71.144	1011.7	291.5	18.4	65.0	48.3	.0246	1.707	3.361	7.411	4.6995	66.842
71.144	1011.7	291.7	18.5	65.3	39.1	.0199	1.380	2.719	5.988	3.4110	48.516
71.144	1011.7	292.0	18.8	65.9	29.9	.0152	1.054	2.079	4.577	2.2962	32.660
71.144	1011.7	292.4	19.3	66.7	24.8	.0126	.875	1.724	3.796	1.7588	25.017
71.144	1011.7	292.9	19.7	67.5	20.3	.0104	.717	1.411	3.111	1.3254	18.851
71.144	1011.7	293.0	19.9	67.8	13.4	.0069	.474	.934	2.059	.7670	10.909
71.144	1011.7	293.9	20.8	69.4	13.3	.0068	.469	.924	2.037	.7568	10.765
71.144	1011.7	294.6	20.8	69.4	20.5	.0105	.723	1.423	3.138	1.3436	19.110
71.144	1011.7	293.9	20.7	69.3	25.2	.0129	.892	1.759	3.870	1.7953	25.535
71.144	1011.7	293.8	20.6	69.1	29.9	.0153	1.055	2.077	4.579	2.3023	32.746
71.144	1011.7	293.5	20.4	68.6	39.0	.0199	1.376	2.709	5.972	3.3807	48.084
71.144	1011.7	293.1	19.9	67.9	48.1	.0246	1.698	3.343	7.370	4.6840	66.622
71.144	1011.7	292.8	19.6	67.3	57.3	.0293	2.025	3.987	8.790	6.1668	87.713
71.144	1011.7	292.5	19.3	66.8	66.3	.0338	2.340	4.607	10.157	7.7104	109.668
70.865	1007.7	292.1	18.9	66.0	75.5	.0386	2.668	5.255	11.581	9.4881	134.952
70.865 *****	1007.7 *****	291.7 *****	18.6 *****	65.4 *****	85.1	.0435	3.006	5.920	13.051	11.5323	164.028
71.119	1011.7	292.6	19.5	67.1							
.050	.7	.7	.7	1.3	DEVIATIONS						

TABLE 43
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 12 PART 28M TEST DESCRIPTION CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED IN THE NORMAL FLOW DIRECTION (S/N SIDE UPSTREAM) AFTER THE ADDITION OF 10.2 MG OF SYNTHETIC CONTAMINANT AND AFTER 20 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 028) INLET PRESSURE = 415 PSIA (NOMINAL).

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.50	50.4	74.7	.50	49.8	76.7	415.7	75.7	.0608
.41	50.4	74.7	.40	50.0	76.7	415.7	75.7	.0489
.31	50.4	75.0	.30	50.0	76.9	415.7	76.0	.0370
.26	50.1	75.1	.25	49.6	77.0	415.7	76.0	.0309
.21	50.2	75.3	.20	50.0	77.0	415.7	76.2	.0250
.15	50.2	75.9	.14	50.0	77.2	415.7	76.5	.0170
.22	50.1	75.9	.21	49.8	77.2	415.1	76.5	.0256
.26	50.2	75.9	.25	50.0	77.2	415.1	76.5	.0310
.31	49.9	75.7	.31	49.4	77.2	414.4	76.4	.0370
.40	50.2	75.6	.40	49.6	77.1	414.4	76.3	.0486
.45	50.2	75.5	.45	49.4	76.9	413.8	76.2	.0544
.50	50.1	75.5	.50	49.2	76.9	413.1	76.2	.0599

TABLE 43
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 12 PART 28M TEST DESCRIPTION

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA ACQUIRED IN THE NORMAL FLOW DIRECTION (S/N SIDE UPSTREAM) AFTER THE ADDITION OF 10.2 MG OF SYNTHETIC CONTAMINANT-AND-AFTER 20 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 028) INLET PRESSURE = 415 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSI_D)	GROSS DIFF. PRESS SECONDARY (PSI_D)	AVG GROSS DIFF. PRESS (PSI_D)	TARE DIFF. PRESS (PSI_D)	NET DIFF. PRESS (PSI_D)
415.7	75.7	.0608	248.628	248.628	248.628	.000	248.628
415.7	75.7	.0489	154.248	154.248	154.248	.000	154.248
415.7	76.0	.0370	94.590	94.590	94.590	.000	94.590
415.7	76.0	.0309	71.062	71.232	71.147	.000	71.146
415.7	76.2	.0250	51.395	51.662	51.528	.000	51.528
415.7	76.5	.0170	29.685	29.902	29.793	.000	29.793
415.1	76.5	.0256	52.900	53.240	53.070	.000	53.069
415.1	76.5	.0310	71.437	71.548	71.492	.000	71.492
414.4	76.4	.0378	95.222	95.222	95.222	.000	95.221
414.4	76.3	.0486	153.301	153.301	153.301	.000	153.301
413.8	76.2	.0544	192.442	192.442	192.442	.000	192.442
413.1	76.2	.0599	244.209	244.209	244.209	.000	244.209

TARE DIFF. PRESS = -3.40000E-05 + -4.44000E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 43
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED IN THE NORMAL FLOW DIRECTION (S/N SIDE UPSTREAM) AFTER THE ADDITION OF 10. 2 MG OF SYNTHETIC CONTAMINANT AND AFTER 20 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES.

TEST NUMBER 12 PART 28M TEST DESCRIPTION: TEST SPECIMEN (S/N 028) INLET PRESSURE = 415 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS									NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE					
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	SCFM	GN_2 KG/HR	GN_2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.229	415.7	297.5	24.3	75.7	48.1	.0693	1.700	3.747	17.4803	248.628
29.229	415.7	297.4	24.3	75.7	38.7	.0489	1.368	2.694	10.8447	154.248
29.229	415.7	297.6	24.4	76.0	29.3	.0370	1.036	2.040	6.6503	94.590
29.229	415.7	297.6	24.5	76.0	24.5	.0309	.864	1.701	5.0021	71.146
29.229	415.7	297.7	24.5	76.2	19.8	.0250	.700	1.379	3.6228	51.528
29.229	415.7	297.9	24.7	76.5	13.5	.0170	.476	.937	2.0946	29.793
29.183	415.1	297.9	24.7	76.5	20.2	.0256	.714	1.405	3.7312	53.069
29.183	415.1	297.9	24.7	76.5	24.5	.0310	.865	1.703	5.0264	71.492
29.138	414.4	297.8	24.7	76.4	29.2	.0370	1.032	2.031	6.6947	95.221
29.138	414.4	297.8	24.6	76.3	38.3	.0486	1.353	2.665	10.7781	153.301
29.092	413.8	297.7	24.6	76.2	48.9	.0544	1.514	2.981	13.5300	192.442
29.046	413.1	297.7	24.5	76.2	47.2	.0599	1.665	3.279	17.1696	244.209
*****	*****	*****	******	******						
29.179	415.0	297.7	24.6	76.2						
.051	.7	.1	.1	.2	DEVIATIONS					

TABLE 44

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 12 PART 280R TEST DESCRIPTION

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED IN THE REVERSE FLOW DIRECTION (S/N SIDE DOWN STREAM) AFTER COMPLETION OF THE FORWARD FLOW TESTS AND AFTER THE ADDITION OF 5.3 MG OF SYNTHETIC CONTAMINANT AND 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 028) INLET PRESSURE = 1000 PSIA(NOMINAL).

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSI_A)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSI_A)	TEMP (DEG. F)	PRESSURE (PSI_A)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.87	50.1	75.5	.91	47.6	80.6	1017.2	78.0	.0426
.78	50.1	74.4	.81	48.4	79.9	1017.2	77.2	.0384
.69	50.1	73.6	.71	48.4	79.3	1017.2	76.6	.0339
.60	50.2	73.5	.61	48.8	79.1	1017.2	76.3	.0294
.50	50.4	73.5	.50	49.5	79.1	1017.2	76.3	.0246
.41	50.4	73.6	.40	49.5	79.1	1017.2	76.4	.0198
.31	50.2	74.2	.30	49.5	79.3	1017.2	76.7	.0151
.26	50.1	74.6	.26	49.5	79.5	1013.2	77.0	.0128
.21	50.4	75.0	.20	49.9	79.6	1017.2	77.3	.0103
.14	50.2	75.7	.13	49.9	79.9	1017.2	77.8	.0068
.14	49.7	76.7	.13	49.2	80.4	1017.2	78.5	.0067
.22	50.4	76.4	.21	49.9	80.3	1017.2	78.4	.0105
.26	49.7	76.1	.26	49.2	80.2	1017.2	78.2	.0127
.31	50.1	75.7	.31	49.3	80.1	1017.2	77.9	.0152
.41	50.1	74.9	.40	49.2	79.6	1013.2	77.3	.0199
.50	49.9	73.9	.50	49.0	79.1	1013.2	76.5	.0246
.59	50.1	73.1	.60	48.8	78.5	1013.2	75.8	.0290
.69	50.2	72.1	.70	48.5	77.9	1013.2	75.0	.0339
.78	50.2	71.2	.81	48.4	77.1	1013.2	74.1	.0386
.87	49.9	70.5	.91	47.6	76.3	1009.2	73.4	.0429

TABLE 44

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED IN THE REVERSE FLOW DIRECTION (S/N SIDE DOWN STREAM) AFTER COMPLETION OF THE FORWARD FLOW TESTS AND AFTER THE ADDITION OF 5.3 MG OF SYNTHETIC CONTAMINANT AND 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 028) INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST NUMBER 12 PART NUMBER TEST DESCRIPTION

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1017.2	78.	.0426	125.840	125.840	125.840	-0.000	125.840
1017.2	77.2	.0384	109.110	109.110	109.110	-0.000	109.110
1017.2	76.6	.0339	92.569	92.696	92.633	-0.000	92.633
1017.2	76.3	.0294	76.722	76.914	76.818	-0.000	76.818
1017.2	76.3	.0246	60.971	61.447	61.209	-0.000	61.209
1017.2	76.4	.0196	46.642	46.611	46.626	-0.000	46.627
1017.2	76.7	.0151	33.084	33.296	33.190	-0.000	33.190
1013.2	77.1	.0128	27.000	27.083	27.042	-0.000	27.042
1017.2	77.3	.0103	20.685	20.768	20.726	-0.000	20.727
1017.2	77.6	.0068	12.515	12.577	12.546	-0.000	12.546
1017.2	78.5	.0067	12.341	12.520	12.431	-0.000	12.431
1017.2	78.4	.0105	21.148	21.342	21.245	-0.000	21.245
1017.2	78.2	.0127	26.711	26.911	26.811	-0.000	26.811
1017.2	77.9	.0152	33.431	33.700	33.565	-0.000	33.566
1013.2	77.3	.0199	46.816	46.927	46.871	-0.000	46.871
1013.2	76.5	.0246	60.721	61.131	60.926	-0.000	60.926
1013.2	75.8	.0296	75.473	75.967	75.720	-0.000	75.720
1013.2	75.	.0339	92.813	93.328	93.073	-0.000	93.073
1013.2	74.1	.0386	110.373	111.373	110.373	-0.000	110.373
1009.2	73.4	.0429	127.102	127.102	127.102	-0.000	127.103

TARE DIFF. PRESS = -1.64000E-04 + -1.26930E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 44

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 12 PART 280R TEST DESCRIPTION

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED IN THE REVERSE FLOW DIRECTION (S/N SIDE DOWN STREAM) AFTER COMPLETION OF THE FORWARD FLOW TESTS AND AFTER THE ADDITION OF 5.3 MG OF SYNTHETIC CONTAMINANT AND 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 028) INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
71.514	1017.2	298.7	25.6	78.6	82.2	.0429	2.902	5.715	12.599	8.8474	125.840
71.514	1017.2	298.2	25.1	77.2	74.3	.0384	2.624	5.166	11.390	7.6712	109.110
71.514	1017.2	297.9	24.8	76.6	65.6	.0339	2.316	4.560	10.052	6.5127	92.633
71.514	1017.2	297.8	24.6	76.3	56.9	.0294	2.009	3.957	8.723	5.4008	76.818
71.514	1017.2	297.8	24.6	76.3	47.7	.0246	1.684	3.316	7.310	4.3034	61.209
71.514	1017.2	297.9	24.7	76.4	38.4	.0198	1.356	2.671	5.888	3.2782	46.627
71.514	1017.2	298.0	24.8	76.7	29.1	.0151	1.029	2.026	4.467	2.3335	33.190
71.235	1013.2	298.2	25.	77.	24.7	.0128	.871	1.715	3.781	1.9012	27.042
71.514	1017.2	298.3	25.2	77.3	19.8	.0103	.700	1.379	3.040	1.4572	20.727
71.514	1017.2	298.6	25.4	77.8	13.1	.0068	.463	.912	2.011	.8821	12.546
71.514	1017.2	299.0	25.8	78.5	12.9	.0067	.456	.899	1.982	.8740	12.431
71.514	1017.2	298.9	25.8	78.4	21.3	.0105	.716	1.410	3.108	1.4937	21.245
71.514	1017.2	298.8	25.7	78.2	24.4	.0127	.862	1.698	3.744	1.8850	26.811
71.514	1017.2	298.7	25.5	77.9	29.3	.0152	1.034	2.039	4.489	2.3599	33.566
71.235	1013.2	298.3	25.1	77.3	38.4	.0199	1.355	2.668	5.883	3.2954	46.871
71.235	1013.2	297.9	24.7	76.5	47.4	.0247	1.673	3.294	7.261	4.2835	60.926
71.235	1013.2	297.5	24.3	75.8	56.8	.0295	1.979	3.897	8.591	5.3236	75.720
71.235	1013.2	297.1	23.9	75.0	66.6	.0345	2.317	4.563	10.059	6.5437	93.073
71.235	1013.2	296.8	23.4	74.1	74.7	.0388	2.638	5.194	11.451	7.7600	110.373
70.956 *****	1009.2 *****	296.2 *****	23.1 *****	73.4 *****	82.8	.0429	2.925	5.759	12.697	8.9362	127.103
71.403	1015.6	298.0	24.9	76.7							
.145	2.1	.6	.6	1.0	DEVIATIONS						

TABLE 45

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 12 PART 28PR TEST DESCRIPTION

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED IN THE REVERSE FLOW DIRECTION (S/N SIDE DOWN STREAM) AFTER COMPLETION OF THE FORWARD FLOW TESTS AND AFTER THE ADDITION OF 5.3 MG OF SYNTHETIC CONTAMINANT AND 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 028) INLET PRESSURE = 415 PSIA (NOMINAL).

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.58	50.2	78.9	.60	49.1	80.2	415.5	79.6	.0709
.50	49.9	79.9	.50	49.1	80.2	415.5	79.6	.0596
.40	50.4	79.9	.43	49.7	81.2	414.8	79.6	.0484
.31	50.2	79.9	.30	49.9	80.3	414.8	79.7	.0368
.26	50.4	79.0	.26	50.1	80.4	414.8	79.7	.0312
.21	49.9	79.0	.21	49.5	81.4	414.2	79.7	.0253
.14	50.1	79.2	.13	49.9	80.5	414.2	79.9	.0164
.14	50.2	79.3	.13	50.1	80.6	414.2	79.9	.0164
.21	50.1	79.4	.21	49.7	80.5	414.2	79.8	.0253
.26	49.7	78.8	.26	49.3	80.4	413.5	79.6	.0311
.31	50.1	79.0	.31	49.5	80.3	413.5	79.5	.0370
.41	50.1	78.4	.41	49.3	80.1	412.9	79.3	.0489
.50	49.9	78.3	.50	48.9	80.0	412.2	79.1	.0599
.57	50.1	78.4	.58	48.9	79.8	411.6	79.1	.0690

TABLE 45

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED IN THE REVERSE FLOW DIRECTION (S/N SIDE DOWN STREAM) AFTER COMPLETION OF THE FORWARD FLOW TESTS AND AFTER THE ADDITION OF 5.3 MG OF SYNTHETIC CONTAMINANT AND 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 028) INLET PRESSURE = 415 PSIA (NOMINAL).

TEST NUMBER 12 PART 2APR TEST DESCRIPTION

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
415.5	79.6	.0729	288.716	288.716	288.716	.001	288.715
415.5	79.6	.0596	196.546	196.546	196.546	.000	196.545
414.8	79.6	.0484	137.519	137.519	137.519	.000	137.518
414.8	79.7	.0368	93.057	93.012	93.034	.000	93.034
414.9	79.7	.0312	73.814	73.757	73.786	.000	73.785
414.2	79.7	.0253	55.477	55.705	55.586	.000	55.585
414.2	79.9	.0164	32.543	32.775	32.659	-0.000	32.659
414.2	79.9	.0164	32.775	32.890	32.833	-0.000	32.832
414.2	79.8	.0253	56.419	56.712	56.561	.000	56.560
413.9	79.6	.0311	73.314	73.442	73.378	.000	73.377
413.9	79.5	.0370	94.275	94.275	94.275	.000	94.274
412.7	79.3	.0489	140.360	140.360	140.360	.000	140.359
412.2	79.1	.0599	199.702	199.702	199.702	.000	199.702
411.9	79.1	.0690	271.355	271.355	271.355	.001	271.354

TARE DIFF. PRESS = -3.43000E-05 + -4.44000E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 45

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED IN THE REVERSE FLOW DIRECTION (S/N SIDE DOWN STREAM) AFTER COMPLETION OF THE FORWARD FLOW TESTS AND AFTER THE ADDITION OF 5.3 MG OF SYNTHETIC CONTAMINANT AND 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 028) INLET PRESSURE = 415 PSIA (NOMINAL).

TEST NUMBER 12 PART 28PR TEST DESCRIPTION

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/ MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.210	415.5	299.6	26.4	79.6	55.7	.0709	1.967	3.573	8.539	20.2987	288.715
29.210	415.5	299.6	26.4	79.6	46.8	.0596	1.654	3.257	7.182	13.8185	196.545
29.165	414.8	299.6	26.4	79.6	38.0	.0484	1.342	2.642	5.824	9.6685	137.518
29.165	414.8	299.6	26.5	79.7	28.9	.0368	1.021	2.011	4.433	6.5409	93.034
29.165	414.8	299.7	26.5	79.7	24.5	.0312	.866	1.705	3.759	5.1876	73.785
29.119	414.2	299.7	26.5	79.7	19.8	.0253	.699	1.376	3.033	3.9080	55.585
29.119	414.2	299.8	26.6	79.9	12.9	.0164	.455	.895	1.974	2.2961	32.659
29.119	414.2	299.8	26.6	79.9	12.8	.0164	.454	.893	1.969	2.3083	32.832
29.119	414.2	299.7	26.6	79.8	19.9	.0253	.701	1.381	3.044	3.9766	56.560
29.073	413.5	299.6	26.5	79.6	24.3	.0311	.859	1.690	3.727	5.1589	73.377
29.073	413.5	299.5	26.4	79.5	28.9	.0370	1.021	2.011	4.433	6.6281	94.274
29.028	412.9	299.4	26.3	79.3	38.2	.0489	1.349	2.657	5.857	9.8682	140.359
28.982	412.2	299.3	26.2	79.1	46.8	.0599	1.652	3.254	7.173	14.0404	199.702
28.937	411.6	299.3	26.2	79.1	53.8	.0690	1.898	3.738	8.240	19.0781	271.354
*****	*****	*****	******	******							
29.106	414.2	299.6	26.4	79.6							
.062	.2	.1	.1	.2	DEVIATIONS						

TABLE 46

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 12 PART 28RR TEST DESCRIPTION CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED IN THE REVERSE FLOW DIRECTION (S/N SIDE DOWN STREAM) AFTER COMPLETION OF THE FORWARD FLOW TESTS AND AFTER THE ADDITION OF 11.1 MG OF SYNTHETIC CONTAMINANT AND 20 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 028) INLET PRESSURE = 1000 PSIA (NOMINAL).

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.87	49.9	72.6	.91	47.6	76.7	1013.2	74.6	.0427
.78	50.1	71.4	.81	48.1	75.9	1013.2	73.6	.0385
.69	50.4	70.5	.70	48.9	75.1	1009.2	72.8	.0343
.60	50.2	70.1	.60	49.1	74.8	1009.2	72.5	.0295
.50	50.1	70.1	.50	49.1	74.7	1009.2	72.4	.0246
.41	50.1	70.3	.40	49.3	74.7	1009.2	72.5	.0201
.31	51.0	70.9	.30	50.4	75.1	1009.2	73.0	.0154
.26	49.7	71.3	.25	49.3	75.2	1009.2	73.3	.0127
.21	49.9	71.7	.20	49.7	75.5	1009.2	73.6	.0103
.14	49.9	72.4	.13	49.7	75.8	1009.2	74.1	.0068
.14	49.5	73.7	.13	49.3	76.4	1009.2	75.1	.0068
.22	50.4	73.5	.21	50.2	76.4	1009.2	75.0	.0107
.26	49.9	73.3	.25	49.5	76.4	1009.2	74.9	.0127
.31	50.1	73.0	.30	49.7	76.4	1009.2	74.7	.0152
.41	50.2	72.3	.40	49.5	76.1	1005.3	74.2	.0200
.50	50.1	71.5	.50	49.1	75.7	1005.3	73.6	.0247
.59	49.9	70.8	.60	48.7	75.1	1005.3	72.9	.0293
.69	50.1	69.9	.70	48.7	74.6	1005.3	72.3	.0341
.78	49.9	69.2	.81	48.1	74.0	1005.3	71.6	.0386
.87	50.1	68.6	.91	47.9	73.2	1001.3	70.9	.0435

TABLE 46

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED IN THE REVERSE FLOW DIRECTION (S/N SIDE DOWN STREAM) AFTER COMPLETION OF THE FORWARD FLOW TESTS AND AFTER THE ADDITION OF 11.1 MG OF SYNTHETIC CONTAMINANT AND 20 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 028) INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST NUMBER 12 PART 2ARR TEST DESCRIPTION

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1013.2	74.6	.427	226.007	226.007	226.007	-0.000	226.007
1013.2	73.6	.385	190.969	190.969	190.969	-0.000	190.969
1009.2	72.8	.343	158.773	158.773	158.773	-0.000	158.773
1009.2	72.5	.295	125.629	125.629	125.629	-0.000	125.630
1009.2	72.4	.246	95.642	95.642	95.642	-0.000	95.643
1009.2	72.5	.201	70.771	71.022	70.896	-0.000	70.896
1009.2	73.0	.154	48.479	48.295	48.387	-0.000	48.387
1009.2	73.3	.127	36.877	36.984	36.931	-0.000	36.931
1009.2	73.6	.013	27.827	27.888	27.857	-0.000	27.858
1009.2	74.1	.0068	15.934	16.011	15.973	-0.000	15.973
1009.2	75.1	.0068	15.818	15.954	15.886	-0.000	15.886
1009.2	75.0	.013	29.045	29.211	29.128	-0.000	29.128
1009.2	74.9	.0127	36.761	36.984	36.872	-0.000	36.873
1009.2	74.7	.152	47.783	47.979	47.881	-0.000	47.881
1005.3	74.2	.0200	70.021	70.390	70.205	-0.000	70.205
1005.3	73.6	.1247	96.274	96.274	96.274	-0.000	96.274
1005.3	72.9	.0293	125.314	125.314	125.314	-0.000	125.314
1005.3	72.3	.0341	158.141	158.141	158.141	-0.000	158.142
1005.3	71.6	.0386	193.494	193.494	193.494	-0.000	193.495
1001.3	70.9	.0435	233.898	233.898	233.898	-0.000	233.898

TARE DIFF. PRESS = -1.64000E-04 + -1.26930E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 46

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED IN THE REVERSE FLOW DIRECTION (S/N SIDE DOWN STREAM) AFTER COMPLETION OF THE FORWARD FLOW TESTS AND AFTER THE ADDITION OF 11.1 MG OF SYNTHETIC CONTAMINANT AND 20 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 028) INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST NUMBER 12 PART 28RR TEST DESCRIPTION

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS.	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
71.235	1013.2	296.8	23.7	74.6	82.6	.0427	2.915	5.740	12.656	15.8899	226.007
71.235	1013.2	296.3	23.1	73.6	74.6	.385	2.633	5.184	11.429	13.4265	190.969
70.956	1009.2	295.8	22.7	72.8	66.4	.343	2.346	4.617	10.184	11.1629	158.773
70.956	1009.2	295.6	22.5	72.5	57.1	.295	2.017	3.972	8.756	8.8326	125.630
70.956	1009.2	295.6	22.4	72.4	47.7	.0246	1.683	3.315	7.307	6.7243	95.643
70.956	1009.2	295.7	22.5	72.5	39.0	.0201	1.376	2.709	5.971	4.9845	70.896
70.956	1009.2	295.9	22.8	73.0	29.8	.0154	1.051	2.070	4.563	3.4020	48.387
70.956	1009.2	296.1	22.9	73.3	24.5	.0127	.864	1.700	3.749	2.5965	36.931
70.956	1009.2	296.3	23.1	73.6	20.0	.0103	.705	1.389	3.062	1.9586	27.856
70.956	1009.2	296.6	23.4	74.1	13.1	.0068	.464	.913	2.013	1.1230	15.973
70.956	1009.2	297.1	23.9	75.1	13.1	.0068	.462	.910	2.006	1.1169	15.886
70.956	1009.2	297.0	23.9	75.0	20.6	.0107	.726	1.430	3.152	2.0479	29.128
70.956	1009.2	297.0	23.8	74.9	24.4	.0127	.861	1.696	3.739	2.5924	36.873
70.956	1009.2	296.9	23.7	74.7	29.2	.0152	1.033	2.034	4.484	3.3664	47.881
70.677	1005.3	296.6	23.4	74.2	38.4	.0200	1.357	2.671	5.889	4.9359	70.205
70.677	1005.3	296.3	23.1	73.6	47.5	.0247	1.677	3.302	7.279	6.7687	96.274
70.677	1005.3	295.9	22.7	72.9	56.4	.0293	1.992	3.922	8.647	8.8104	125.314
70.677	1005.3	295.5	22.4	72.3	65.8	.0341	2.323	4.575	10.086	11.1185	158.142
70.677	1005.3	295.2	22.0	71.6	74.5	.0386	2.632	5.183	11.427	13.6040	193.495
70.398 *****	1001.3 *****	294.8 *****	21.6 ******	70.9 ******	83.7	.0435	2.956	5.820	12.832	16.4447	233.898
70.886	1008.2	296.1	23.0	73.4							
.154	2.2	.5	.5	1.0	DEVIATIONS						

DATE: 9-20-76

TABLE 47

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 12 PART 28SR TEST DESCRIPTION CONTAMINATED CONDITION = FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED IN THE REVERSE SLOW DIRECTION (S/N SIDE DOWN STREAM) AFTER COMPLETION OF THE FORWARD FLOW TESTS AND AFTER THE ADDITION OF 11.1 MG OF SYNTHETIC CONTAMINANT AND 20 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 028) INLET PRESSURE = 415 PSIA(NOMINAL).

FLOWMETER CONDITIONS

FLOWMETER ONE			FLOWMETER TWO		
FLOW RATE (ACFM)	PRESSURE (PSI_A)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSI_A)	TEMP (DEG. F)
.41	50.6	78.0	.40	50.1	78.9
.36	50.4	78.1	.36	50.1	79.0
.31	50.6	78.1	.30	50.1	79.1
.26	50.4	78.2	.26	50.1	79.2
.21	50.1	78.3	.20	49.9	79.4
.14	50.1	78.6	.13	50.1	79.6
.14	50.1	78.9	.13	50.1	79.9
.21	49.9	78.9	.21	49.5	80.0
.26	50.1	78.9	.25	49.7	80.0
.31	50.1	78.8	.31	49.7	80.0
.35	50.1	78.8	.35	49.5	80.0
.41	50.1	78.7	.41	49.3	79.8

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSI_A)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
419.5	78.5	.0487
418.8	78.5	.0427
418.8	78.6	.0368
418.8	78.7	.0313
418.8	78.9	.0247
418.8	79.1	.0165
418.8	79.4	.0164
418.2	79.5	.0248
418.2	79.5	.0304
417.5	79.4	.0367
417.5	79.4	.0418
416.9	79.2	.0483

TABLE 47

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 12 PART PBSR TEST DESCRIPTION CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED IN THE REVERSE SLOW DIRECTION (S/N SIDE DOWN STREAM) AFTER COMPLETION OF THE FORWARD FLOW TESTS AND AFTER THE ADDITION OF 11.1 MG OF SYNTHETIC CONTAMINANT AND 20 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 028) INLET PRESSURE = 415 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
419.5	78.5	.487	249.575	249.575	249.575	.000	249.575
418.8	78.5	.4427	188.023	188.023	188.023	.000	188.023
418.8	78.6	.0368	142.254	142.254	142.254	.000	142.253
418.8	78.7	.0313	107.532	107.532	107.532	.000	107.532
418.8	78.9	.0247	74.565	74.704	74.634	.000	74.634
418.8	79.1	.0165	41.987	42.254	42.121	-0.000	42.120
418.9	79.4	.154	41.755	42.081	41.918	-0.000	41.918
418.2	79.5	.0248	75.315	75.651	75.483	.000	75.483
418.2	79.5	.0304	103.744	103.744	103.744	.000	103.744
417.5	79.4	.0367	141.307	141.307	141.307	.000	141.306
417.5	79.4	.0418	180.447	180.447	180.447	.000	180.447
416.9	79.2	.483	245.472	245.472	245.472	.000	245.471

TARE DIFF. PRESS = -3.41000E-05 + -4.44000E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 47

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED IN THE REVERSE SLOW DIRECTION (S/N SIDE DOWN STREAM) AFTER COMPLETION OF THE FORWARD FLOW TESTS AND AFTER THE ADDITION OF 11.1 MG OF SYNTHETIC CONTAMINANT AND 20 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 028) INLET PRESSURE = 415 PSIA (NOMINAL).

TEST NUMBER 12 PART 28SR TEST DESCRIPTIO

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS.	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. C	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN_2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.493	419.5	299.	25.8	78.5	38.7	.0437	1.367	2.692	5.935	17.5469	249.575
29.447	418.5	299.0	25.9	78.5	33.9	.0427	1.199	2.360	5.204	13.2193	188.023
29.447	418.8	299.1	25.9	78.6	29.2	.0368	1.032	2.033	4.481	10.0014	142.253
29.447	418.8	299.1	26.0	78.7	24.8	.0313	.877	1.729	3.805	7.5602	107.532
29.447	418.8	299.2	26.0	78.9	19.6	.0247	.693	1.364	3.007	5.2473	74.634
29.447	418.8	299.3	26.2	79.1	13.1	.0165	.462	.910	2.006	2.9614	42.120
29.447	418.8	299.5	26.3	79.4	13.0	.0164	.459	.904	1.992	2.9471	41.918
29.402	418.2	299.5	26.4	79.5	19.6	.0248	.694	1.366	3.012	5.3070	75.483
29.402	418.2	299.5	26.4	79.5	24.0	.0304	.849	1.672	3.685	7.2939	103.744
29.356	417.5	299.5	26.3	79.4	29.0	.0367	1.024	2.019	4.445	9.9348	141.306
29.356	417.5	299.5	26.3	79.4	33.0	.0418	1.166	2.295	5.061	12.6867	180.447
29.311	416.9	299.4	26.2	79.2	38.1	.0483	1.347	2.653	5.848	17.2584	245.471
*****	*****	*****	******	******							
29.417	418.4	299.3	26.1	79.1							
±.043	±.6	.2	.2	.3	DEVIATIONS						

TABLE 48
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 250R TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTAIL PRESSURE. FLOW IN REVERSE DIRECTION. TEST SPECIMEN (S/N 025) INLET PRESSURE = 415 PSIA NOMINAL.

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.54	50.6	84.4	.55	49.9	85.3	415.6	84.8	.0656
.50	50.2	84.3	.50	49.5	85.3	414.9	84.8	.0601
.41	49.7	84.2	.41	49.1	85.3	414.9	84.7	.0485
.31	49.9	84.1	.31	49.5	85.2	414.3	84.7	.0370
.26	50.6	84.1	.26	50.2	85.2	414.3	84.6	.0314
.21	50.2	84.1	.21	50.0	85.2	414.3	84.7	.0252
.13	50.2	84.3	.13	50.0	85.4	414.9	84.8	.0157
.10	50.2	84.5	.09	50.0	85.5	414.9	85.0	.0114
.10	50.1	84.5	.09	49.9	85.4	415.6	84.9	.0114
.13	50.4	84.5	.13	50.2	85.5	415.6	85.0	.0159
.21	50.1	84.4	.21	49.9	85.5	415.6	84.9	.0251
.26	49.9	84.2	.26	49.5	85.5	414.9	84.8	.0310
.31	49.9	84.1	.31	49.5	85.4	414.3	84.7	.0371
.40	50.1	83.9	.40	49.5	85.2	414.3	84.5	.0483
.49	49.7	83.6	.50	48.9	85.1	413.7	84.3	.0593
.54	49.7	83.8	.55	48.7	85.3	413.0	84.4	.0647

TABLE 48
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 250R TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. FLOW IN REVERSE DIRECTION. TEST SPECIMEN (S/N 025) INLET PRESSURE = 415 PSIA NOMINAL.

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
415.6	84.8	.0656	307.299	307.299	307.299	.001	307.299
414.9	84.8	.0601	245.671	245.671	245.671	.000	245.670
414.9	84.7	.0465	169.821	169.821	169.821	.000	169.820
414.9	84.7	.0370	115.777	115.777	115.777	.000	115.777
414.9	84.6	.0314	92.183	93.022	92.603	.000	92.602
414.9	84.7	.0252	69.452	70.267	69.860	.000	69.859
414.9	84.8	.0157	40.520	40.837	40.678	-0.000	40.678
414.9	85.1	.0114	28.642	28.753	28.697	-0.000	28.697
415.6	84.9	.0114	28.526	28.695	28.611	-0.000	28.610
415.6	85.0	.0159	40.925	41.183	41.054	-0.000	41.053
415.9	84.9	.0251	70.202	70.899	70.550	.000	70.550
414.9	84.8	.0310	91.211	92.074	91.643	.000	91.642
414.9	84.7	.0371	117.041	117.041	117.041	.000	117.041
414.9	84.5	.0483	170.769	170.769	170.769	.000	170.768
413.1	84.3	.0593	242.827	242.827	242.827	.000	242.826
413.9	84.4	.0647	300.346	300.346	300.346	.001	300.346

TARE DIFF. PRESS = -3.40000E-05 + -4.44000E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 48
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 25DR TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. FLOW-IN REVERSE DIRECTION. TEST SPECIMEN (S/N 025) INLET PRESSURE = 415 PSIA NOMINAL.

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/ MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.219	415.0	302.5	29.4	84.8	51.0	.0656	1.803	3.550	7.826	21.6053	307.299
29.174	414.7	302.5	29.3	84.8	46.7	.0601	1.650	3.249	7.163	17.2723	245.670
29.174	414.7	302.5	29.3	84.7	37.7	.0485	1.333	2.624	5.786	11.9395	169.820
29.128	414.4	302.4	29.3	84.7	28.7	.0370	1.015	1.998	4.404	8.1399	115.777
29.128	414.4	302.4	29.2	84.6	24.4	.0314	.861	1.695	3.737	6.5106	92.602
29.128	414.4	302.4	29.3	84.7	19.5	.0252	.690	1.359	2.996	4.9116	69.859
29.174	414.7	302.5	29.4	84.8	12.2	.0157	.432	.850	1.875	2.8599	40.678
29.174	414.7	302.6	29.4	85.0	8.9	.0114	.314	.618	1.364	2.0176	28.697
29.219	415.0	302.6	29.4	84.9	8.9	.0114	.313	.616	1.358	2.0115	28.610
29.219	415.0	302.6	29.4	85.0	12.4	.0159	.436	.857	1.894	2.8863	41.053
29.219	415.0	302.6	29.4	84.9	19.5	.0251	.690	1.358	2.995	4.9601	70.550
29.174	414.7	302.5	29.4	84.8	24.1	.0310	.850	1.674	3.691	6.4431	91.642
29.128	414.4	302.5	29.3	84.7	28.8	.0371	1.017	2.003	4.416	8.2288	117.041
29.128	414.4	302.3	29.2	84.5	37.5	.0483	1.324	2.607	5.747	12.0062	170.768
29.083	413.7	302.2	29.1	84.3	46.0	.0593	1.624	3.198	7.051	17.0724	242.826
29.037 *****	413.0 *****	302.3 *****	29.1 ******	84.4 ******	50.1	.0647	1.769	3.484	7.681	21.1164	300.346
29.157	414.7	302.5	29.3	84.7							
.042	.6	.1	.1	.2	DEVIATIONS						

TABLE 49
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 25ER TEST DESCRIPTION

CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. FLOW IN REVERSE DIRECTION. TEST SPECIMEN (S/N 025) INLET PRESSURE = 1000 PSIA NOMINAL.

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.84	49.7	66.3	.90	47.8	71.5	1000.0	68.9	.0423
.76	50.2	65.8	.81	48.5	71.1	1004.0	68.4	.0387
.67	50.2	65.5	.71	48.7	70.5	1000.0	68.0	.0340
.59	49.9	65.6	.61	48.7	70.5	1000.0	68.1	.0294
.49	50.1	65.8	.51	49.3	70.6	1000.0	68.2	.0248
.40	50.2	66.3	.41	49.7	70.9	1000.0	68.6	.0203
.30	50.1	67.0	.30	49.9	71.3	1000.0	69.1	.0152
.26	50.1	67.5	.26	49.9	71.5	1000.0	69.5	.0128
.21	49.7	68.2	.21	49.5	71.8	1000.0	69.9	.0103
.13	49.7	69.2	.13	49.7	72.5	1000.0	70.9	.0065
.13	50.1	70.3	.13	49.9	73.2	1000.0	71.7	.0065
.22	49.9	70.3	.22	49.5	73.2	1000.0	71.7	.0108
.27	49.9	70.0	.27	49.7	73.1	1000.0	71.6	.0134
.31	49.9	69.9	.31	49.5	73.2	1000.0	71.5	.0155
.40	50.1	69.3	.41	49.5	72.9	1000.0	71.1	.0203
.49	49.7	68.8	.51	48.9	72.6	1000.0	70.7	.0247
.58	50.6	68.0	.61	49.5	72.2	1000.0	70.1	.0298
.67	50.1	67.4	.71	48.7	71.8	1000.0	69.6	.0342
.76	50.1	66.8	.81	48.3	71.2	1000.0	69.0	.0386
.85	50.2	66.0	.91	48.3	70.5	1000.0	68.3	.0434

TABLE 49
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 25ER

TEST DESCRIPTION CLEAN CONDITION--FLOW RATE VERSUS DIFFERENTIAL PRESSURE. FLOW IN REVERSE DIRECTION. TEST SPECIMEN (S/N 025) INLET PRESSURE = 1000 PSIA NOMINAL.

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1000.0	68.9	.0423	140.007	140.007	140.007	-0.000	140.007
1004.0	68.4	.0387	125.469	125.469	125.469	-0.000	125.469
1000.0	68.0	.0340	107.455	107.455	107.455	-0.000	107.455
1000.0	68.1	.0294	88.734	89.756	89.245	-0.000	89.246
1000.0	68.2	.0248	72.031	72.690	72.360	-0.000	72.361
1000.0	68.6	.0203	56.638	57.520	57.079	-0.000	57.079
1000.0	69.1	.0152	41.138	41.356	41.247	-0.000	41.247
1000.0	69.5	.0128	33.953	34.099	34.026	-0.000	34.026
1000.0	69.9	.0103	26.421	26.457	26.439	-0.000	26.439
1000.0	70.9	.0065	15.702	15.687	15.694	-0.000	15.694
1000.0	71.7	.0065	15.818	15.915	15.867	-0.000	15.867
1000.0	71.7	.0108	27.580	27.720	27.650	-0.000	27.650
1000.0	71.6	.0134	35.575	35.768	35.672	-0.000	35.672
1000.0	71.5	.0155	42.239	42.394	42.316	-0.000	42.317
1000.0	71.1	.0203	56.764	57.520	57.142	-0.000	57.142
1000.0	70.7	.0247	72.031	72.690	72.360	-0.000	72.361
1000.0	70.1	.0298	90.078	91.020	90.549	-0.000	90.549
1000.0	69.6	.0342	107.455	107.455	107.455	-0.000	107.455
1000.0	69.0	.0386	124.837	124.837	124.837	-0.000	124.837
1000.0	68.3	.0434	144.748	144.748	144.748	-0.000	144.748

TARE DIFF. PRESS = -1.64000E-04 + -1.26930E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 49
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 25ER TEST DESCRIPTION CLEAN CONDITION ~~FLOW RATE VERSUS~~ DIFFERENTIAL PRESSURE. FLOW IN REVERSE DIRECTION. TEST SPECIMEN (S/N 025) ~~INLET~~ PRESSURE = 1000 PSIA NOMINAL.

TEST SPECIMEN INLET CONDITIONS

PRESSURE		TEMPERATURE			FLOW RATE					NET DIFFERENTIAL PRESS	
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/ MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
70.307	1000.0	293.7	20.5	68.9	81.7	.0423	2.884	5.678	12.518	9.8435	140.007
70.586	1004.0	293.4	20.2	68.4	75.0	.0387	2.649	5.216	11.499	8.8214	125.469
70.307	1000.0	293.2	20.0	68.0	65.8	.0340	2.324	4.576	10.088	7.5548	107.455
70.307	1000.0	293.2	20.0	68.1	56.9	.0294	2.008	3.954	8.717	6.2746	89.246
70.307	1000.0	293.3	20.1	68.2	47.9	.0248	1.693	3.333	7.348	5.0875	72.361
70.307	1000.0	293.5	20.3	68.6	39.2	.0203	1.384	2.724	6.006	4.0131	57.079
70.307	1000.0	293.8	20.6	69.1	29.3	.0152	1.033	2.034	4.485	2.9000	41.247
70.307	1000.0	294.0	20.8	69.5	24.8	.0128	.874	1.722	3.795	2.3923	34.026
70.307	1000.0	294.2	21.1	69.9	19.9	.0103	.701	1.381	3.044	1.8589	26.439
70.307	1000.0	294.7	21.6	70.9	12.4	.0065	.439	.865	1.906	1.1034	15.694
70.307	1000.0	295.2	22.1	71.7	12.4	.0065	.438	.863	1.902	1.1155	15.867
70.307	1000.0	295.2	22.1	71.7	20.7	.0108	.732	1.441	3.176	1.9440	27.650
70.307	1000.0	295.1	22.0	71.6	25.7	.0134	.907	1.787	3.939	2.5080	35.672
70.307	1000.0	295.1	22.0	71.5	29.8	.0155	1.051	2.070	4.563	2.9752	42.317
70.307	1000.0	294.9	21.7	71.1	39.0	.0203	1.378	2.713	5.981	4.0175	57.142
70.307	1000.0	294.7	21.5	70.7	47.5	.0247	1.678	3.303	7.282	5.0875	72.361
70.307	1000.0	294.3	21.2	70.1	57.3	.0298	2.025	3.988	8.792	6.3663	90.549
70.307	1000.0	294.0	20.9	69.6	66.0	.0342	2.330	4.589	10.116	7.5548	107.455
70.307	1000.0	293.7	20.5	69.0	74.5	.0386	2.633	5.184	11.428	8.7769	124.837
70.307 *****	1000.0 *****	293.3 *****	20.1 ******	68.3 ******	84.0	.0434	2.965	5.838	12.870	10.1768	144.748
70.321	1000.2	294.1	21.0	69.7							
.026	.4	.6	.6	1.2	DEVIATIONS						

TABLE 50
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5-25 PART 2SA1 TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TEST SPECIMEN (S/N-025) INLET PRESSURE = 1000 PSIA NOMINAL. DATA OBTAINED AFTER REVERSE FLOW DATA RUN.

FLOWMETER ONE CONDITIONS			FLOWMETER TWO CONDITIONS			TEST SPECIMEN INLET CONDITIONS		
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.86	49.7	69.8	.91	47.8	73.3	1000.0	71.6	.0432
.78	5..4	69.2	.81	48.7	72.4	1000.0	70.8	.0395
.69	49.9	69.2	.71	48.5	72.1	1000.0	70.6	.0344
.60	49.9	69.2	.61	48.7	71.5	1000.0	70.4	.0297
.51	5..1	69.2	.51	49.3	71.5	1 04.0	70.4	.0250
.42	5 .2	69.3	.41	49.9	72.3	1000.0	70.8	.0207
.32	5..1	69.8	.31	49.9	73.2	1000.0	71.5	.0155
.27	5..4	7..4	.26	50.2	74.3	1000.0	72.4	.0132
.22	5..2	71.8	.21	50.0	74.5	1000.0	72.7	.0106
.15	49.9	71.6	.14	49.7	75.2	1000.0	73.4	.0071
.15	49.9	73.2	.13	49.9	77.9	1000.0	75.6	.0070
.23	49.9	73.2	.22	49.7	77.9	1000.0	75.6	.0114
.26	5..2	73.1	.25	50.0	77.7	1000.0	75.4	.0129
.32	49.9	72.8	.31	49.5	77.4	1000.0	75.1	.0168
.42	49.9	72.2	.41	49.5	77.1	1000.0	74.6	.0206
.50	5..1	71.6	.50	49.3	75.7	1000.0	74.2	.0250
.60	5..4	7 .9	.61	49.5	76.2	1000.0	73.6	.0301
.69	5..4	70.1	.71	49.3	75.5	1000.0	72.7	.0350
.78	5..6	69.4	.81	48.9	74.7	1000.0	72.0	.0396
.87	5..1	68.9	.91	48.1	74.0	1000.0	71.5	.0436

TABLE 50
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST UMBER 5-25 PART 2541

TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TEST SPECIMEN (S/N 025) INLET PRESSURE = 1000 PSIA NOMINAL. DATA OBTAINED AFTER REVERSE FLOW DATA RUN.

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	VG FLOW RATE (LB/SEC)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1000.0	71.6	.1432	101.766	101.766	101.766	-0.000	101.766
1000.0	70.8	.1395	90.202	91.020	90.611	-0.000	90.611
1000.0	70.6	.1344	75.768	76.482	76.125	-0.000	76.126
1000.0	70.4	.1297	62.777	63.525	63.151	-0.000	63.151
1004.0	70.4	.1250	51.374	52.147	51.760	-0.000	51.761
1000.0	70.9	.1207	40.616	40.722	40.669	-0.000	40.669
1000.0	71.5	.1155	29.202	29.213	29.207	-0.000	29.208
1000.0	72.4	.1132	24.219	24.220	24.219	-0.000	24.220
1000.0	72.7	.1016	18.773	18.834	18.803	-0.000	18.803
1000.0	73.4	.0971	11.994	11.972	11.983	-0.000	11.983
1000.0	75.6	.0970	11.994	12.029	12.011	-0.000	12.011
1000.0	75.6	.1114	20.511	20.666	20.588	-0.000	20.589
1000.0	75.4	.1129	23.698	23.818	23.758	-0.000	23.758
1000.0	75.1	.1158	30.071	31.189	30.130	-0.000	30.130
1000.0	74.6	.1276	40.797	40.953	40.871	-0.000	40.872
1000.0	74.2	.1250	50.998	51.831	51.414	-0.000	51.415
1000.0	73.6	.1301	64.029	64.473	64.251	-0.000	64.251
1000.0	72.7	.1359	77.261	77.747	77.504	-0.000	77.504
1000.0	72.0	.1396	90.324	91.020	90.672	-0.000	90.672
1000.0	71.5	.1436	103.662	103.662	103.662	-0.000	103.662

TARE DIFF. PRESS = -1.640000E-04 + -1.269300E-02 (ACFM) + 2.480700E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 50
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5-25 PART 25A1 TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TEST SPECIMEN (S/N 025) INLET PRESSURE = 1000 PSIA NOMINAL. DATA OBTAINED AFTER REVERSE FLOW DATA RUN.

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	SCFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
70.307	1000.0	295.1	22.0	71.6	82.9	.0432	2.929	5.767	12.714	7.1549	101.766
70.307	1000.0	294.7	21.5	70.8	75.9	.0396	2.681	5.280	11.639	6.3706	90.611
70.307	1000.0	294.6	21.5	70.6	66.2	.0344	2.336	4.600	10.141	5.3522	76.126
70.307	1000.	294.5	21.3	70.4	57.2	.0297	2.019	3.976	8.765	4.4400	63.151
70.586	1004.0	294.5	21.3	70.4	48.4	.0250	1.708	3.364	7.416	3.6391	51.761
70.307	1000.0	294.7	21.6	70.8	39.7	.0207	1.403	2.763	6.092	2.8593	40.669
70.307	1000.0	295.1	21.9	71.5	29.8	.0155	1.054	2.076	4.576	2.0535	29.208
70.307	1000.0	295.6	22.4	72.4	25.4	.0132	.896	1.765	3.890	1.7028	24.220
70.307	1000.0	295.8	22.6	72.7	20.3	.0106	.717	1.412	3.112	1.3220	18.803
70.307	1000.0	296.2	23.0	73.4	13.5	.0071	.478	.942	2.076	.8425	11.983
70.307	1000.0	297.4	24.2	75.6	13.4	.0070	.474	.934	2.058	.8445	12.011
70.307	1000.0	297.4	24.2	75.6	21.7	.114	.767	1.511	3.331	1.4475	20.589
70.307	1000.0	297.3	24.1	75.4	24.7	.0129	.871	1.714	3.779	1.6704	23.758
70.307	1000.0	297.1	24.0	75.1	30.2	.0158	1.066	2.100	4.630	2.1184	30.130
70.307	1000.	296.8	23.7	74.6	39.3	.0206	1.388	2.734	6.027	2.8736	40.872
70.307	1000.0	296.6	23.4	74.2	47.7	.0250	1.685	3.317	7.314	3.6148	51.415
70.307	1000.0	296.3	23.1	73.6	57.7	.0301	2.037	4.011	8.842	4.5173	64.251
70.307	1000.0	295.8	22.6	72.7	67.1	.0350	2.370	4.667	10.289	5.4491	77.504
70.307	1000.0	295.4	22.2	72.0	76.0	.0396	2.682	5.282	11.644	6.3749	90.672
70.307 *****	1000.0 *****	295.1 *****	21.9 *****	71.5 *****	83.8	.0436	2.958	5.824	12.841	7.2882	103.662
70.321	1000.2	295.9	22.6	72.7							
.026	.4	.9	.9	1.6	DEVIATIONS						

TABLE 51
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 12 PART 28BR TEST DESCRIPTION

CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED WITH FLOW IN THE REVERSE (S/N SIDE DOWNSTREAM) DIRECTION. TEST SPECIMEN (S/N 028) INLET PRESSURE = 415 PSIA (NOMINAL).

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP. (DEG. F)	AVG FLOW RATE (ACFM)
.60	50.1	77.0	.60	48.9	78.1	419.5	77.5	.0706
.50	50.4	77.0	.50	49.5	78.0	419.5	77.5	.0599
.41	49.5	77.1	.41	48.7	78.1	418.8	77.6	.0483
.31	50.2	77.3	.30	49.9	78.2	418.8	77.8	.0369
.26	50.4	77.3	.25	50.1	78.3	418.8	77.8	.0308
.21	49.9	77.5	.20	49.5	78.4	418.8	77.9	.0247
.14	49.7	77.7	.13	49.3	78.5	418.8	78.1	.0163
.14	49.5	78.1	.13	49.3	78.6	418.8	78.3	.0163
.22	50.1	78.1	.21	49.7	78.7	418.8	78.4	.0261
.26	50.2	78.1	.25	49.9	78.6	418.2	78.4	.0305
.32	50.4	78.3	.31	49.9	78.6	418.2	78.4	.0374
.41	50.2	78.3	.40	49.5	78.7	417.5	78.5	.0486
.50	50.6	78.3	.50	49.9	78.6	417.5	78.5	.0600
.60	50.6	78.4	.60	49.5	78.7	416.9	78.5	.0722

TABLE 51
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED WITH FLOW IN THE REVERSE (S/N SIDE DOWNSTREAM) DIRECTION. TEST SPECIMEN (S/N 028) INLET PRESSURE = 415 PSIA (NOMINAL).

TEST NUMBER 12 PART 28BR TEST DESCRIPTION

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
419.5	77.5	.0716	268.199	268.199	268.199	.001	268.198
419.5	77.5	.0599	200.334	200.334	200.334	.000	200.333
418.8	77.6	.0483	144.779	144.779	144.779	.000	144.778
418.8	77.8	.0369	101.850	101.850	101.850	.000	101.850
418.8	77.8	.0318	80.972	81.964	81.468	.000	81.467
418.8	77.9	.0247	62.532	63.341	62.936	.000	62.936
418.8	78.1	.0163	38.991	39.800	39.395	=0.000	39.394
418.8	78.3	.0163	38.865	39.627	39.246	=0.000	39.246
418.8	78.4	.0261	66.715	67.444	67.080	.000	67.079
418.8	78.4	.0315	79.903	81.017	80.460	.000	80.460
418.8	78.4	.0374	104.060	104.060	104.060	.000	104.059
417.5	78.5	.0486	145.726	145.726	145.726	.000	145.725
417.5	78.5	.0600	199.071	199.071	199.071	.000	199.070
416.9	78.5	.0722	287.453	287.453	287.453	.001	287.453

TARE DIFF. PRESS = -3.40000E-05 + -4.44000E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 51

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 12 PART 288R TEST DESCRIPTION

CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED WITH FLOW IN THE REVERSE (S/N SIDE DOWNSTREAM) DIRECTION. TEST SPECIMEN (S/N 028) INLET PRESSURE = 415 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/ MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.493	419.5	298.5	25.3	77.5	56.2	.0706	1.985	3.909	8.618	18.8562	268.198
29.493	419.5	298.4	25.3	77.5	47.8	.599	1.687	3.321	7.322	14.0848	200.333
29.447	418.8	298.5	25.3	77.6	38.4	.483	1.357	2.671	5.889	10.1789	144.778
29.447	418.8	298.6	25.4	77.8	29.3	.0369	1.035	2.039	4.495	7.1607	101.860
29.447	418.8	298.6	25.5	77.8	24.5	.0308	.866	1.704	3.757	5.7277	81.467
29.447	418.8	298.7	25.5	77.9	19.6	.247	.692	1.363	3.004	4.4248	62.936
29.447	418.8	298.8	25.6	78.1	12.9	.163	.457	.900	1.985	2.7697	39.394
29.447	418.8	298.9	25.7	78.3	12.9	.163	.456	.898	1.980	2.7592	39.245
29.447	418.8	298.9	25.8	78.4	20.7	.261	.731	1.439	3.173	4.7161	67.079
29.402	418.4	298.9	25.8	78.4	24.1	.0305	.853	1.679	3.702	5.6569	80.460
29.402	418.4	298.9	25.8	78.4	29.7	.0374	1.047	2.062	4.547	7.3161	104.059
29.356	417.9	299.	25.8	78.5	38.5	.0486	1.358	2.674	5.896	10.2455	145.725
29.356	417.9	299.	25.8	78.5	47.5	.0600	1.676	3.300	7.276	13.9960	199.070
29.311	416.4	299.	25.8	78.5	57.1	.0722	2.016	3.970	8.752	20.2099	287.453
*****	*****	*****	******	******							
29.425	418.9	298.8	25.6	78.1							
.042	.9	.2	.2	.3	DEVIATIONS						

TABLE 52
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 12 PART 28AR TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED WITH FLOW IN THE REVERSE (S/N SIDE DOWNSTREAM) DIRECTION. TEST SPECIMEN (S/N 028) INLET PRESSURE 1000 PSIA (NOMINAL).

FLOWMETER ONE			FLOWMETER TWO			TEST SPECIMEN INLET CONDITIONS		
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.86	50.6	72.	.90	48.2	77.3	1007.9	74.7	.0430
.78	49.9	71.	.81	48.8	76.3	1 07.9	73.6	.0385
.69	50.1	70.8	.7.	48.6	75.9	1 07.9	73.3	.0341
.60	50.2	7 .5	.6.	49.1	75.7	1.04.0	73.2	.0297
.50	49.7	7 .8	.5.	48.8	75.7	1.04.0	73.3	.0246
.40	49.9	71.1	.4	49.2	75.8	1.07.9	73.4	.0197
.31	50.4	71.5	.30	49.9	76..	1.04.0	73.8	.0152
.26	49.9	72.	.25	49.5	76.2	1 04.0	74.1	.0127
.21	50.1	72.3	.2	49.7	76.4	1.04.0	74.5	.0103
.14	50.1	73.3	.13	49.7	76.8	1 .04.0	75.0	.0069
.14	50.6	74.1	.13	5. .3	77.1	1 .04.0	75.6	.0069
.22	50.2	73.9	.21	49.9	77.0	1.04.0	75.5	.0107
.26	50.4	73.7	.25	49.9	77..	1 04.0	75.3	.0127
.31	50.4	73.2	.31	49.9	76.8	1 04.0	75.0	.0155
.40	50.2	72.5	.4.	49.7	76.5	1 .04.0	74.6	.0199
.49	50.2	72.	.49	49.3	76.2	1 04.0	74.1	.0245
.59	50.4	71.1	.6.	49.2	75.7	1 00.0	73.4	.0296
.69	50.1	7 .3	.7.	48.8	75.1	1 00.0	72.7	.0343
.77	50.1	69.1	.80	48.4	74.4	1 00.0	71.9	.0388
.87	50.2	6 .3	.91	48.2	73.4	1 00.0	70.9	.0437

TABLE 52

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED WITH FLOW IN THE REVERSE (S/N SIDE DOWNSTREAM) DIRECTION. TEST SPECIMEN (S/N 028) INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST NUMBER 12 PART 28AR TEST DESCRIPTION

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	VG FLOW RATE (.CFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1007.9	74.7	.0430	120.684	12[illegible].384	120.684	=0.000	120.684
1007.9	73.6	.0385	106.164	106.164	106.164	=0.000	106.164
1007.9	73.3	.0341	89.914	91.644	90.779	=0.000	90.779
1004.0	73.2	.0297	76.879	77.755	77.317	=0.000	77.317
1004.0	73.3	.0246	62.615	63.236	62.925	=0.000	62.925
1007.9	73.4	.0197	48.949	49.978	49.464	=0.000	49.464
1004.0	73.8	.0152	36.945	37.668	37.307	=0.000	37.307
1004.0	74.1	.0117	30.190	30.936	30.563	=0.000	30.563
1004.0	74.5	.0093	24.567	24.621	24.594	=0.000	24.594
1004.0	75.[illegible]	.0089	14.876	15.915	15.895	=0.000	15.896
1004.0	75.6	.0089	16.165	16.259	16.212	=0.000	16.212
1004.0	75.5	.0117	25.321	25.481	25.401	=0.000	25.401
1004.0	75.3	.0127	30.190	30.879	30.534	=0.000	30.535
1004.0	75.[illegible]	.0155	37.447	38.244	37.845	=0.000	37.846
1004.0	74.6	.0199	49.573	5[illegible].294	49.934	=0.000	49.934
1004.0	74.1	.0245	62.615	63.551	63.083	=0.000	63.083
1000.0	73.4	.0296	77.119	78.387	77.753	=0.000	77.753
1000.0	72.7	.0343	90.713	92.907	91.810	=0.000	91.810
1000.0	71.9	.0388	106.795	106.795	106.795	=0.000	106.796
1000.0	70.9	.0437	123.209	123.209	123.209	=0.000	123.210

DIFF. PRESS = -1.64000E-04 + -1.26930E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 52

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. DATA ACQUIRED WITH FLOW IN THE REVERSE (S/N SIDE DOWNSTREAM) DIRECTION. TEST SPECIMEN (S/N 028) INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST NUMBER 12 PART 28AR TEST DESCRIPTION

TEST SPECIMEN INLET CONDITIONS

PRESSURE		TEMPERATURE			FLOW RATE					NET DIFFERENTIAL PRESS	
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
70.865	1007.8	296.9	23.7	74.7	82.7	.0430	2.922	5.753	12.683	8.4860	120.684
70.865	1007.8	296.3	23.1	73.6	74.3	.0385	2.624	5.167	11.391	7.4641	106.164
70.865	1007.8	296.1	23.0	73.3	65.7	.0341	2.321	4.571	10.077	6.3824	90.779
70.586	1004.0	296.0	22.9	73.2	57.1	.0297	2.015	3.968	8.749	5.4859	77.317
70.586	1004.0	296.1	22.9	73.3	47.2	.0246	1.667	3.282	7.236	4.4241	62.925
70.865	1007.8	296.2	23.0	73.4	38.0	.0197	1.342	2.642	5.824	3.4777	49.464
70.586	1004.0	296.4	23.2	73.8	29.2	.0152	1.031	2.031	4.477	2.6830	37.307
70.586	1004.0	296.6	23.4	74.1	24.4	.0127	.862	1.698	3.742	2.1488	30.563
70.586	1004.0	296.8	23.6	74.5	19.8	.0103	.700	1.377	3.037	1.7291	24.594
70.586	1004.0	297.1	23.9	75.0	13.1	.0069	.464	.913	2.012	1.1176	15.896
70.586	1004.0	297.4	24.2	75.6	13.3	.0069	.468	.922	2.033	1.1398	16.212
70.586	1004.0	297.3	24.2	75.5	20.4	.0107	.721	1.420	3.130	1.7859	25.401
70.586	1004.0	297.2	24.1	75.3	24.3	.0127	.857	1.688	3.720	2.1468	30.535
70.586	1004.0	297.0	23.9	75.0	29.6	.0155	1.046	2.060	4.542	2.6608	37.846
70.586	1004.0	296.8	23.7	74.6	38.2	.0199	1.349	2.656	5.855	3.5107	49.934
70.586	1004.0	296.5	23.4	74.1	47.1	.0245	1.663	3.275	7.221	4.4952	63.988
70.307	1000.0	296.2	23.0	73.4	56.7	.0296	2.002	3.944	8.690	5.4666	77.753
70.307	1000.0	295.8	22.6	72.7	65.8	.0343	2.323	4.574	10.084	6.4549	91.810
70.307	1000.0	295.3	22.2	71.9	74.5	.0388	2.631	5.180	11.420	7.5085	106.796
70.307	1000.0	294.8	21.6	70.9	84.0	.0437	2.966	5.839	12.874	8.6625	123.210
*****	*****	*****	******	*****							
70.586	1004.0	296.4	23.3	73.9							
.112	1.0	.5	.5	.9	DEVIATIONS						

TABLE 53

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 7/23/76

TEST NUMBER 6 PART 3B TEST DESCRIPTION CLEAN CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE. BEFORE PROOF TEST. TEST SPECIMEN (S/N 023) INLET PRESSURE = 415 PSIA (NOMINAL)

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.47	50.4	83.5	.48	49.9	83.5	421.8	83.0	.0567
.45	49.7	83.6	.45	48.9	83.6	421.5	83.1	.0527
.40	50.4	83.6	.40	49.9	83.6	421.2	83.1	.0476
.36	50.8	83.6	.35	50.3	83.7	421.3	83.1	.0435
.31	50.6	83.6	.31	50.2	83.7	421.2	83.2	.0368
.26	50.2	83.6	.26	49.9	83.8	421.2	83.2	.0306
.21	50.4	83.7	.21	50.3	83.7	421.3	83.2	.0249
.16	50.6	83.8	.15	50.4	83.8	421.2	83.3	.0188
.12	50.2	83.8	.11	50.1	83.8	421.2	83.3	.0132
.12	50.4	83.8	.11	50.4	83.9	421.4	83.4	.0133
.16	50.1	83.7	.16	49.9	83.9	421.4	83.3	.0189
.21	50.1	84.6	.21	49.9	84.9	421.4	83.2	.0251
.26	49.7	83.5	.26	49.3	83.8	421.2	83.1	.0306
.31	50.1	83.3	.31	49.9	83.8	421.2	83.1	.0361
.36	50.1	83.3	.35	49.5	83.7	421.2	83.0	.0419
.40	49.9	83.3	.40	49.3	83.7	420.5	83.0	.0475
.44	49.9	83.3	.44	49.7	83.6	419.9	82.9	.0520
.48	49.9	83.4	.48	49.7	83.5	419.9	82.9	.0565

TABLE 53

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 6 PART 5B TEST DESCRIPTION CLEAN CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE..BEFORE PROOF PRESSURE TEST. TEST SPECIMEN (S/N 023) INLET PRESSURE = 415 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
421.8	83.3	.0567	299.869	299.869	299.869	.000	299.869
421.2	83.1	.0507	258.203	258.203	258.203	.000	258.203
421.6	83.1	.0476	213.380	213.380	213.380	.000	213.380
421.2	83.1	.0425	180.553	180.553	180.553	.000	180.552
421.2	83.2	.0368	146.147	146.147	146.147	.000	146.146
421.2	83.2	.0306	115.844	115.844	115.844	.000	115.844
421.2	83.2	.0249	88.899	89.645	89.272	.000	89.271
421.2	83.3	.0188	64.322	65.024	64.673	.000	64.673
421.4	83.3	.0132	44.764	44.497	44.631	-0.000	44.630
421.8	83.4	.0133	43.210	42.945	43.078	-0.000	43.077
421.8	83.3	.0189	63.321	64.077	63.699	.000	63.699
421.8	83.2	.0251	87.429	88.382	87.906	.000	87.906
421.2	83.1	.0306	113.003	113.003	113.003	.000	113.003
421.2	83.1	.0361	144.253	144.253	144.253	.000	144.252
421.4	83.0	.0419	176.765	176.765	176.765	.000	176.764
420.5	83.0	.0475	214.959	214.959	214.959	.000	214.958
419.9	82.9	.0520	252.206	252.206	252.206	.000	252.206
419.9	82.9	.0565	299.869	299.869	299.869	.000	299.869

TARE DIFF. PRESS = -3.40000E-05 + -4.40000E-04 (ACFM) + 1.50939E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 53

PAGE: 3
DATE: 7/23/76

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 6 PART 3B TEST DESCRIPTION CLEAN CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE. BEFORE PROOF PRESSURE TEST. TEST SPECIMEN (S/N 023) INLET PRESSURE = 415 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	CFM	SCFM	GN_2 KG/HR	GN_2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.658	421.8	301.5	28.3	83.0	45.1	.0567	1.588	3.127	6.894	21.0829	299.869
29.612	421.2	301.5	28.4	83.1	41.6	.0527	1.474	2.902	6.398	18.1834	258.203
29.612	421.2	301.5	28.4	83.1	37.5	.0476	1.330	2.618	5.772	15.0021	213.380
29.612	421.2	301.6	28.4	83.1	33.4	.0425	1.189	2.341	5.161	12.6941	180.552
29.612	421.2	301.6	28.4	83.2	28.9	.0368	1.028	2.025	4.464	10.2751	146.146
29.612	421.2	301.6	28.5	83.2	24.0	.0306	.855	1.684	3.712	8.1446	115.844
29.612	421.2	301.6	28.5	83.2	19.5	.0249	.696	1.371	3.022	6.2764	89.271
29.612	421.2	301.7	28.5	83.3	14.6	.0188	.525	1.034	2.279	4.5476	64.673
29.612	421.2	301.7	28.5	83.3	10.0	.0132	.369	.727	1.603	3.1378	44.630
29.658	421.8	301.7	28.6	83.4	10.1	.0133	.371	.731	1.615	3.0286	43.077
29.658	421.8	301.7	28.5	83.3	14.8	.0189	.530	1.044	2.302	4.4785	63.699
29.658	421.8	301.6	28.5	83.2	19.7	.0251	.702	1.383	3.048	6.1804	87.906
29.612	421.2	301.6	28.4	83.1	24.0	.0306	.857	1.687	3.718	7.9449	113.003
29.612	421.2	301.5	28.4	83.1	28.5	.0361	1.010	1.989	4.386	10.1419	144.252
29.612	421.2	301.5	28.3	83.1	32.9	.0419	1.171	2.306	5.085	12.4278	176.764
29.567	420.5	301.5	28.3	83.0	37.4	.0475	1.326	2.611	5.756	15.1131	214.958
29.521	419.9	301.5	28.3	82.9	40.8	.0520	1.449	2.853	6.291	17.7318	252.205
29.521 *****	419.9 *****	301.5 *****	28.3 *****	82.9 *****	44.5	.0565	1.575	3.102	6.839	21.0829	299.869
29.610	421.6	301.6	28.4	83.1							
.025	.3	.1	.1	.1	DEVIATIONS						

TABLE 54

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 7/23/76

TEST NUMBER 6 PART 5A TEST DESCRIPTION CLEAN CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE. BEFORE PROOF PRESSURE TEST. TEST SPECIMEN (S/N 023) INLET PRESSURE = 1000 PSIA (NOMINAL)

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.83	49.5	74.2	.90	47.4	78.2	1011.9	77.2	.0414
.75	50.2	73.6	.81	48.5	79.7	1011.9	76.6	.0381
.66	50.1	73.4	.70	48.7	79.1	1007.9	76.2	.0335
.58	49.9	73.3	.60	48.7	78.9	1007.9	76.1	.0288
.49	49.9	73.8	.50	48.9	79.1	1007.9	76.4	.0241
.39	49.9	74.	.40	49.3	79.4	1007.9	77.0	.0194
.31	50.2	75.3	.31	49.9	79.9	1007.9	77.6	.0152
.25	49.9	76.8	.25	49.5	80.6	1007.9	78.5	.0125
.21	50.1	77.2	.20	79.9	80.9	1007.9	79.0	.0102
.14	50.2	77.8	.13	50.1	81.3	1007.9	79.5	.0067
.14	50.1	79.5	.13	49.9	80.3	1007.9	80.9	.0067
.22	50.1	78.3	.21	49.9	80.2	1011.9	80.8	.0106
.25	50.1	78.1	.25	49.9	80.1	1011.9	80.6	.0125
.31	50.1	78.6	.31	49.9	80.1	1007.9	80.4	.0152
.40	50.1	78.5	.40	49.5	81.9	1007.9	80.0	.0198
.49	50.2	77.2	.51	49.5	81.5	1007.9	79.3	.0247
.58	50.1	76.2	.60	79.1	81.1	1007.9	78.7	.0291
.67	49.9	75.7	.70	48.5	80.6	1007.9	78.1	.0334
.75	50.2	74.9	.81	48.5	79.9	1007.9	77.4	.0381
.84	49.9	74.2	.91	47.9	79.2	1007.9	76.7	.0424

DATE: 7/23/76

TABLE 54

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 6 PART 5A TEST DESCRIPTION CLEAN CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE. BEFORE PROOF PRESSURE TEST. TEST SPECIMEN (S/N 023) INLET PRESSURE = 1000 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1011.9	77.2	.0414	161.403	161.403	161.403	=0.000	161.403
1011.9	76.6	.0381	145.365	145.365	145.365	=0.000	145.365
1007.9	76.2	.0335	124.472	124.472	124.472	=0.000	124.472
1007.9	76.1	.0288	104.902	104.902	104.902	=0.000	104.902
1007.9	76.4	.0241	84.294	85.015	84.655	=0.000	84.655
1007.9	77.0	.0194	66.283	67.023	66.653	=0.000	66.653
1007.9	77.6	.0152	50.142	50.925	50.534	=0.000	50.534
1007.9	78.5	.0125	41.867	41.635	41.751	=0.000	41.751
1007.9	79.0	.0102	33.484	33.229	33.356	=0.000	33.356
1007.9	79.4	.0067	21.655	21.406	21.530	=0.000	21.531
1007.9	80.9	.0067	21.468	21.406	21.437	=0.000	21.437
1011.9	80.8	.0106	34.975	34.839	34.907	=0.000	34.908
1011.9	80.6	.0125	42.177	41.981	42.079	=0.000	42.079
1007.9	80.4	.0152	50.642	51.241	50.942	=0.000	50.942
1007.9	80.0	.0198	67.408	68.286	67.847	=0.000	67.847
1007.9	79.2	.0247	86.505	87.225	86.865	=0.000	86.865
1007.9	78.7	.0291	106.164	106.164	106.164	=0.000	106.164
1007.9	78.1	.0334	124.788	124.788	124.788	=0.000	124.788
1007.9	77.4	.0381	145.621	145.621	145.621	=0.000	145.621
1007.9	76.7	.0424	166.769	166.769	166.769	=0.000	166.770

TARE DIFF. PRESS = -1.64000E-04 + -1.26930E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 54

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

PAGE: 3
DATE: 7/23/76

TEST NUMBER 6 PART 5A TEST DESCRIPTION CLEAN CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE, BEFORE PROOF PRESSURE TEST. TEST SPECIMEN (S/N 023) INLET PRESSURE = 1000 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
71.144	1011.9	298.3	25.1	77.2	81.1	.0414	2.812	5.537	12.206	11.3478	161.403
71.144	1011.9	297.9	24.8	76.6	74.7	.0381	2.589	5.098	11.240	10.2160	145.305
70.865	1007.9	297.7	24.6	76.2	65.3	.0335	2.269	4.467	9.848	8.7513	124.472
70.865	1007.9	297.6	24.5	76.1	56.8	.0280	1.952	3.843	8.472	7.3753	104.902
70.865	1007.9	297.8	24.7	76.4	46.4	.0241	1.634	3.218	7.094	5.9518	84.655
70.865	1007.9	298.2	25.0	77.0	37.4	.0194	1.315	2.590	5.710	4.6862	66.659
70.865	1007.9	298.5	25.4	77.6	29.0	.0152	1.025	2.019	4.451	3.5529	50.534
70.865	1007.9	299.0	25.8	78.5	23.7	.0125	.842	1.658	3.655	2.9354	41.751
70.865	1007.9	299.3	26.1	79.0	19.3	.0102	.688	1.354	2.986	2.3452	33.356
70.865	1007.9	299.6	26.4	79.5	12.6	.0067	.453	.892	1.966	1.5138	21.531
70.865	1007.9	300.2	27.2	80.9	12.5	.0067	.450	.886	1.954	1.5072	21.437
71.144	1011.9	300.3	27.1	80.8	20.1	.0106	.714	1.406	3.099	2.4542	34.908
71.144	1011.9	300.2	27.0	80.6	24.0	.0125	.846	1.667	3.674	2.9585	42.079
70.865	1007.9	300.0	26.9	80.4	29.0	.0152	1.024	2.016	4.445	3.5816	50.942
70.865	1007.9	299.8	26.6	80.0	37.8	.0198	1.330	2.619	5.774	4.7701	67.847
70.865	1007.9	299.5	26.3	79.3	47.3	.0247	1.661	3.271	7.211	6.1073	86.865
70.865	1007.9	299.1	26.0	78.7	56.3	.0297	1.965	3.869	8.529	7.4641	106.164
70.865	1007.9	298.8	25.6	78.1	64.8	.0334	2.257	4.445	9.799	8.7735	124.788
70.865	1007.9	298.4	25.2	77.4	74.2	.0381	2.574	5.068	11.173	10.2382	145.621
70.865	1007.9	298.0	24.8	76.7	83.0	.0424	2.868	5.647	12.449	11.7251	166.770
*****	*****	*****	******	******							
70.921	1008.4	298.0	25.8	78.4							
.089	1.3	.8	.8	1.4	DEVIATIONS						

TABLE 55
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 230R TEST DESCRIPTION

CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA ACQUIRED AFTER ~~10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN2 IMPACT CYCLES.~~ FLOW IN REVERSE DIRECTION. TEST SPECIMEN (S/N 023) INLET PRESSURE = 415 PSIA NOMINAL. DATA OBTAINED AFTER PROOF TEST.

FLOW METER CONDITIONS						TEST SPECIMEN INLET CONDITIONS.		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.52	49.9	89.5	.54	48.9	90.9	418.8	90.2	.0624
.50	50.2	89.3	.51	49.5	90.7	418.2	90.0	.0598
.41	50.2	89.2	.42	49.7	90.7	418.2	89.9	.0496
.31	50.4	89.0	.31	50.0	90.4	417.5	89.7	.0369
.26	50.4	88.8	.26	50.0	90.4	417.5	89.6	.0315
.21	50.4	88.8	.21	50.0	90.4	417.5	89.6	.0254
.15	50.2	88.8	.14	50.0	90.5	417.5	89.7	.0174
.15	50.4	89.0	.14	50.2	90.5	417.5	89.7	.0175
.23	50.2	88.7	.23	49.9	90.4	416.9	89.5	.0272
.26	51.4	88.4	.26	50.0	90.2	416.9	89.3	.0315
.31	49.9	88.2	.31	49.5	90.0	416.2	89.1	.0369
.40	50.1	88.1	.40	49.5	89.7	415.6	88.9	.0480
.50	50.2	88.0	.51	49.3	89.5	415.6	88.8	.0600
.52	50.1	88.2	.54	49.1	89.5	414.9	88.8	.0633

TABLE 55
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 23DR TEST DESCRIPTION

CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA ACQUIRED AFTER 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. FLOW IN REVERSE DIRECTION. TEST SPECIMEN (S/N 023) INLET PRESSURE = 415 PSIA NOMINAL. DATA OBTAINED AFTER PROOF PRESSURE TEST.

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
418.8	90.2	.0624	291.076	291.076	291.076	.001	291.075
418.8	90.0	.0598	261.684	261.684	261.684	.000	261.683
418.8	89.9	.0496	188.046	188.046	188.046	.000	188.045
417.5	89.7	.0369	125.153	125.153	125.153	.000	125.153
417.5	89.6	.0315	102.398	102.398	102.398	.000	102.397
417.5	89.6	.0254	78.296	79.011	78.653	.000	78.653
417.5	89.7	.0174	50.918	51.515	51.216	.000	51.216
417.5	89.7	.0175	50.793	51.515	51.154	.000	51.153
416.9	89.5	.0272	83.862	84.700	84.281	.000	84.280
416.9	89.3	.0315	102.082	102.082	102.082	.000	102.081
416.8	89.1	.0369	125.785	125.785	125.785	.000	125.785
415.0	88.9	.0480	180.777	180.777	180.777	.000	180.776
415.0	88.8	.0600	266.424	266.424	266.424	.000	266.424
414.9	88.8	.0633	308.774	308.774	308.774	.001	308.774

TARE DIFF. PRESS = -3.40000E-05 + -4.44000E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 55
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 23DR TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA ACQUIRED AFTER 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. FLOW IN REVERSE DIRECTION. TEST SPECIMEN (S/N 023) INLET PRESSURE = 415 PSIA NOMINAL. DATA OBTAINED AFTER PROOF PRESSURE TEST.

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.441	418.5	305.5	32.4	90.2	48.5	.0624	1.713	3.373	7.436	20.4646	291.075
29.402	418.4	305.4	32.2	90.0	46.4	.0598	1.640	3.230	7.120	18.3982	261.683
29.402	418.4	305.3	32.2	89.9	38.5	.0496	1.361	2.679	5.906	13.2209	188.045
29.356	417.8	305.2	32.1	89.7	28.6	.0369	1.011	1.991	4.390	8.7991	125.153
29.356	417.8	305.2	32.0	89.6	24.5	.0315	.864	1.701	3.749	7.1993	102.397
29.356	417.8	305.2	32.0	89.6	19.7	.0254	.696	1.371	3.023	5.5298	78.653
29.356	417.8	305.2	32.0	89.7	13.5	.0174	.476	.938	2.067	3.6008	51.216
29.356	417.8	305.2	32.1	89.7	13.5	.0175	.478	.941	2.075	3.5964	51.153
29.310	416.8	305.1	32.0	89.5	21.1	.0272	.744	1.465	3.229	5.9255	84.280
29.310	416.8	305.0	31.8	89.3	24.4	.0315	.861	1.696	3.740	7.1770	102.081
29.265	416.2	304.9	31.7	89.1	28.6	.0369	1.009	1.987	4.381	8.8435	125.785
29.219	415.6	304.8	31.6	88.9	37.1	.0480	1.311	2.581	5.689	12.7098	180.776
29.219	415.6	304.7	31.5	88.8	46.4	.0600	1.638	3.225	7.109	18.7315	266.424
29.174 *****	414.9 *****	304.7 *****	31.6 ******	88.8 ******	48.9	.0633	1.727	3.400	7.495	21.7089	308.774
29.323	417.1	305.1	31.9	89.5							
.063	.9	.2	.2	.4	DEVIATIONS						

TABLE 56
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 23ER TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA ACQUIRED AFTER ~~10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES~~. FLOW IN REVERSE DIRECTION. TEST SPECIMEN (S/N 023) INLET PRESSURE = 1000 PSIA NOMINAL. DATA OBTAINED AFTER PROOF PRESSURE TEST.

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.85	50.1	83.2	.91	47.9	87.8	1004.0	85.5	.0430
.77	50.1	82.8	.81	48.3	86.9	1004.0	84.5	.0387
.68	50.6	81.2	.71	49.1	86.0	1004.0	83.6	.0345
.59	50.4	80.9	.61	49.3	85.6	1004.0	83.3	.0297
.56	50.1	81.1	.58	49.3	85.7	1004.0	83.4	.0248
.40	50.1	81.5	.41	49.5	85.8	1004.0	83.6	.0200
.31	50.2	82.0	.31	49.9	86.2	1007.9	84.1	.0154
.26	50.4	82.5	.26	50.0	86.2	1004.0	84.4	.0129
.22	50.1	82.9	.21	49.9	86.5	1004.0	84.7	.0106
.15	50.1	83.4	.14	49.9	86.7	1004.0	85.1	.0074
.15	50.2	84.2	.14	50.0	87.3	1004.0	85.8	.0074
.23	49.7	84.2	.22	49.5	87.3	1004.0	85.8	.0112
.26	49.9	84.2	.26	49.5	87.3	1004.0	85.8	.0130
.31	49.9	84.1	.31	49.3	87.2	1004.0	85.6	.0153
.40	50.1	83.4	.40	49.5	86.9	1004.0	85.1	.0200
.50	50.1	82.7	.51	49.3	86.5	1004.0	84.6	.0250
.59	50.4	81.9	.60	49.3	86.0	1004.0	84.0	.0296
.66	50.2	81.2	.70	48.9	85.6	1004.0	83.4	.0338
.76	50.1	80.5	.81	48.3	85.0	1004.0	82.8	.0384
.87	50.2	80.0	.91	48.3	84.4	1004.0	82.2	.0436

TABLE 56
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART P3ER

TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA ACQUIRED AFTER 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. FLOW IN REVERSE DIRECTION. TEST SPECIMEN (S/N 023) INLET PRESSURE - 1000 PSIA NOMINAL. DATA OBTAINED AFTER PROOF PRESSURE TEST.

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1004.0	85.5	.0439	143.168	143.168	143.168	-0.000	143.168
1004.0	84.5	.0387	126.733	126.733	126.733	-0.000	126.734
1004.0	83.6	.0345	110.615	110.615	110.615	-0.000	110.615
1004.0	83.3	.0297	92.63.	93.233	92.931	-0.000	92.932
1004.0	83.4	.0248	75.023	75.534	75.279	-0.000	75.279
1004.0	83.6	.0200	59.522	60.048	59.785	-0.000	59.785
1007.9	84.1	.0154	45.136	45.194	45.165	-0.000	45.165
1004.0	84.4	.0129	37.082	37.265	37.173	-0.000	37.174
1004.0	84.7	.0106	29.665	29.787	29.726	-0.000	29.727
1004.0	85.1	.0074	20.337	20.380	20.358	-0.000	20.359
1004.0	85.8	.0074	20.395	20.551	20.473	-0.000	20.474
1004.0	85.8	.0112	31.635	31.856	31.746	-0.000	31.746
1004.0	85.8	.0130	37.314	37.553	37.433	-0.000	37.433
1004.0	85.6	.0153	44.440	44.703	44.571	-0.000	44.572
1004.0	85.1	.0200	58.896	59.416	59.156	-0.000	59.156
1004.0	84.6	.0250	75.645	76.166	75.906	-0.000	75.906
1004.0	84.0	.0296	92.023	92.917	92.470	-0.000	92.470
1004.0	83.4	.0338	109.983	109.983	109.983	-0.000	109.983
1004.0	82.8	.0384	126.733	126.733	126.733	-0.000	126.734
1004.0	82.2	.0436	146.012	146.012	146.012	-0.000	146.012

TARE DIFF. PRESS = -1.64000E-04 + -1.26930E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3.

TABLE 56
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 23ER

TEST DESCRIPTION: CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA ACQUIRED AFTER 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. FLOW IN REVERSE DIRECTION. TEST SPECIMEN (S/N 023) INLET PRESSURE - 1000 PSIA NOMINAL. DATA OBTAINED AFTER PROOF PRESSURE TEST.

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
70.586	1004.0	302.9	29.7	85.5	80.8	.0430	2.854	5.620	12.389	10.0657	143.168
70.586	1004.0	302.3	29.1	84.5	72.8	.0387	2.572	5.064	11.164	8.9103	126.734
70.586	1004.0	301.8	28.7	83.6	65.0	.0345	2.295	4.518	9.961	7.7770	110.615
70.586	1004.0	301.6	28.5	83.3	56.0	.0297	1.977	3.893	8.583	6.5337	92.932
70.586	1004.0	301.7	28.6	83.4	46.7	.0248	1.651	3.250	7.166	5.2926	75.279
70.586	1004.0	301.9	28.7	83.6	37.8	.0200	1.335	2.628	5.793	4.2033	59.785
70.865	1007.9	302.1	28.9	84.1	29.1	.0154	1.029	2.026	4.467	3.1754	45.165
70.586	1004.0	302.2	29.1	84.4	24.4	.0129	.861	1.695	3.737	2.6136	37.174
70.586	1004.0	302.4	29.3	84.7	19.9	.0106	.704	1.387	3.057	2.0900	29.727
70.586	1004.0	302.7	29.5	85.1	13.9	.0074	.490	.964	2.126	1.4314	20.359
70.586	1004.0	303.0	29.9	85.8	13.9	.0074	.491	.967	2.131	1.4394	20.474
70.586	1004.0	303.0	29.9	85.8	21.0	.0112	.742	1.461	3.221	2.2320	31.746
70.586	1004.0	303.0	29.9	85.8	24.3	.0130	.860	1.693	3.733	2.6318	37.433
70.586	1004.0	302.9	29.8	85.6	28.7	.0153	1.014	1.996	4.400	3.1337	44.572
70.586	1004.0	302.7	29.5	85.1	37.5	.0200	1.325	2.610	5.753	4.1591	59.156
70.586	1004.0	302.4	29.2	84.6	47.0	.0250	1.661	3.271	7.211	5.3367	75.906
70.586	1004.0	302.0	28.9	84.0	55.8	.0296	1.969	3.877	8.547	6.5013	92.470
70.586	1004.0	301.7	28.6	83.4	63.7	.0338	2.248	4.427	9.760	7.7326	109.983
70.586	1004.0	301.4	28.2	82.8	72.5	.0384	2.560	5.041	11.114	8.9103	126.734
70.586 *****	1004.0 *****	301.0 *****	27.9 ******	82.2 ******	82.5	.0436	2.914	5.737	12.649	10.2657	146.012
70.600	1004.8	302.2	29.1	84.3							
.026	.4	.5	.5	.9	DEVIATIONS						

TABLE 57
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 23H TEST DESCRIPTION

CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA ACQUIRED AFTER 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 023) INLET PRESSURE = 415 PSIA NOMINAL.

FLOWMETER CONDITIONS

FLOWMETER ONE			FLOWMETER TWO		
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)
.68	49.9	78.9	.91	47.9	81.3
.78	50.2	79.1	.81	48.5	81.3
.70	50.2	79.3	.71	48.9	81.5
.61	50.4	79.3	.61	49.3	81.4
.51	50.1	79.3	.50	49.1	81.5
.42	50.2	79.5	.41	49.9	81.7
.32	50.2	79.7	.31	49.9	81.8
.27	50.4	79.9	.26	50.0	81.9
.22	50.4	80.1	.21	50.2	82.0
.15	50.2	80.3	.14	50.0	82.1
.15	50.1	80.8	.14	49.9	82.5
.23	49.9	80.9	.22	49.9	82.6
.28	50.1	80.8	.26	49.9	82.5
.32	50.1	80.8	.31	49.7	82.6
.42	49.9	80.6	.41	49.3	82.5
.51	50.2	80.3	.51	49.5	82.4
.61	50.2	80.2	.61	49.3	82.2
.70	50.2	80.1	.71	48.9	82.0
.79	50.1	80.0	.81	48.3	81.8
.87	49.9	80.0	.91	47.9	81.7

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
412.4	80.1	.1059
411.7	80.2	.0955
411.1	80.4	.0850
411.1	80.3	.0736
411.1	80.4	.0608
411.1	80.6	.0504
411.1	80.8	.0380
411.1	80.9	.0326
411.1	81.0	.0260
411.1	81.2	.0173
411.7	81.6	.0172
411.1	81.7	.0269
411.1	81.7	.0328
411.1	81.7	.0387
411.1	81.5	.0500
410.4	81.4	.0620
410.4	81.2	.0740
409.8	81.0	.0849
409.1	80.9	.0962
408.5	80.9	.1063

TABLE 57
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 23H TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA ACQUIRED AFTER 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 023) INLET PRESSURE = 415 PSIA NOMINAL.

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
412.4	80.1	.1059	153.386	153.386	153.386	.002	153.385
411.7	80.2	.0955	129.999	129.999	129.999	.001	129.997
411.1	80.4	.0850	108.824	108.824	108.824	.001	108.823
411.1	80.3	.0736	88.569	88.913	88.741	.001	88.740
411.1	80.4	.0608	68.244	68.687	68.465	.000	68.464
411.1	80.6	.0514	52.713	53.201	52.957	.000	52.955
411.1	80.8	.0380	37.758	38.013	37.885	.000	37.884
411.1	80.9	.0326	31.268	31.396	31.332	.000	31.330
411.1	81.0	.0260	23.852	23.932	23.892	.000	23.891
411.1	81.2	.0173	14.871	14.943	14.907	.000	14.906
411.1	81.6	.0172	14.813	14.943	14.878	.000	14.877
411.1	81.7	.0269	24.779	24.907	24.843	.000	24.842
411.1	81.7	.0328	31.558	31.798	31.678	.000	31.677
411.1	81.7	.0387	38.685	38.877	38.781	.000	38.779
411.1	81.5	.0500	52.588	53.201	52.894	.000	52.893
410.4	81.4	.0620	70.368	70.899	70.634	.001	70.632
410.4	81.2	.0744	89.424	90.178	89.801	.001	89.799
409.8	81.0	.0849	109.140	109.140	109.140	.001	109.139
409.1	80.9	.0962	130.947	130.947	130.947	.001	130.946
408.5	80.9	.1063	155.283	155.283	155.283	.002	155.281

TARE DIFF. PRESS = -3.40000E-05 + -4.44000E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 57
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 23H TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA ACQUIRED AFTER 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. TEST SPECIMEN (S/N 023) INLET PRESSURE = 415 PSIA NOMINAL.

TEST SPECIMEN INLET CONDITIONS

PRESSURE		TEMPERATURE			FLOW RATE					NET DIFFERENTIAL PRESS	
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	CFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
28.991	412.4	299.3	26.1	79.1	82.6	.1459	2.916	5.746	12.658	10.7840	153.385
28.946	411.7	300.0	26.8	80.2	74.3	.1955	2.624	5.167	11.391	9.1397	129.997
28.900	411.1	300.0	26.9	80.4	66.0	.0850	2.332	4.591	10.121	7.6510	108.823
28.900	411.1	300.0	26.9	80.3	57.2	.0736	2.019	3.979	8.763	6.2390	88.740
28.900	411.1	300.1	26.9	80.4	47.2	.0608	1.668	3.289	7.240	4.8135	68.464
28.900	411.1	300.2	27.0	80.6	39.1	.0504	1.381	2.719	5.994	3.7231	52.955
28.900	411.1	300.2	27.1	80.8	29.5	.0380	1.041	2.049	4.518	2.6635	37.884
28.900	411.1	300.3	27.2	80.9	25.3	.0326	.895	1.761	3.883	2.2028	31.330
28.900	411.1	300.4	27.2	81.0	20.1	.0260	.711	1.401	3.088	1.6797	23.891
28.900	411.1	300.5	27.3	81.2	13.4	.0173	.475	.935	2.061	1.0480	14.906
28.946	411.7	300.7	27.6	81.6	13.4	.172	.473	.931	2.052	1.0459	14.877
28.900	411.1	300.8	27.7	81.7	20.8	.0269	.735	1.447	3.189	1.7465	24.842
28.900	411.1	300.8	27.7	81.7	25.4	.328	.897	1.765	3.892	2.2271	31.677
28.900	411.1	300.8	27.7	81.7	29.9	.0387	1.058	2.086	4.591	2.7265	38.779
28.900	411.1	300.7	27.5	81.5	38.7	.0500	1.368	2.694	5.939	3.7187	52.893
28.855	411.4	300.6	27.4	81.4	48.0	.0620	1.694	3.336	7.355	4.9659	70.632
28.855	411.4	300.5	27.3	81.2	57.3	.0740	2.023	3.984	8.782	6.3135	89.799
28.809	409.8	300.4	27.2	81.0	65.6	.0849	2.317	4.564	10.060	7.6732	109.139
28.764	409.1	300.3	27.2	80.9	74.2	.0962	2.622	5.163	11.383	9.2064	130.946
28.719 *****	408.5 *****	300.3 *****	27.1 ******	80.9 ******	82.0	.1063	2.895	5.701	12.568	10.9173	155.281
28.884	410.8	300.4	27.2	81.0							
.042	.6	.2	.2	.4	DEVIATIONS						

TABLE 58
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 23F TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA ACQUIRED AFTER 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. FLOW IN REVERSE DIRECTION. TEST SPECIMEN (S/N 023) INLET PRESSURE = 1000 PSIA NOMINAL.

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.87	50.1	77.7	.90	47.9	82.7	1005.3	80.2	.0432
.79	49.5	76.8	.82	47.8	81.8	1005.3	79.3	.0388
.69	50.1	76.8	.71	48.5	81.6	1005.3	79.2	.0343
.60	49.7	76.9	.61	48.7	81.6	1005.3	79.2	.0296
.51	49.9	77.3	.53	48.9	81.7	1005.3	79.5	.0250
.42	50.3	77.9	.41	49.9	82.1	1005.3	79.9	.0206
.32	50.5	78.6	.30	50.1	82.4	1005.3	80.5	.0155
.27	49.9	79.3	.26	49.5	82.8	1005.3	81.0	.0130
.22	50.3	79.9	.21	49.9	83.1	1005.3	81.5	.0108
.14	50.1	80.6	.13	49.9	83.5	1005.3	82.0	.0069
.14	50.1	81.6	.13	49.9	83.9	1005.3	82.8	.0069
.22	49.9	81.5	.21	49.7	84.0	1005.3	82.7	.0106
.27	49.9	81.3	.26	49.5	84.1	1005.3	82.6	.0131
.32	49.7	81.1	.31	49.3	84.1	1005.3	82.6	.0156
.42	49.5	80.4	.41	48.9	83.8	1001.3	82.1	.0203
.51	49.9	79.5	.51	49.1	83.5	1001.3	81.5	.0251
.60	50.3	78.7	.60	49.1	82.9	1001.3	80.8	.0298
.69	49.7	77.9	.71	48.3	82.4	1001.3	80.1	.0343
.78	50.3	77.1	.81	48.5	81.8	1001.3	79.4	.0392
.87	50.1	76.3	.91	48.1	81.1	1001.3	78.7	.0437

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TABLE 58
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 03F

TEST DESCRIPTION: CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA ACQUIRED AFTER 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. FLOW IN REVERSE DIRECTION. TEST SPECIMEN (S/N 023) INLET PRESSURE = 1000 PSIA NOMINAL.

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1005.3	80.2	.0432	50.498	51.199	50.849	-0.000	50.849
1005.3	79.3	.0388	44.961	44.879	44.920	-0.000	44.920
1005.3	79.2	.0343	38.53	38.628	38.579	-0.000	38.579
1005.3	79.2	.0296	32.099	32.182	32.140	-0.000	32.140
1005.3	79.5	.0250	26.073	26.093	26.083	-0.000	26.083
1005.3	79.9	.0206	20.453	20.475	20.464	-0.000	20.464
1005.3	80.5	.0155	14.659	14.695	14.677	-0.000	14.677
1005.3	81.0	.0130	11.994	12.010	12.002	-0.000	12.002
1005.3	81.5	.0108	9.676	9.669	9.672	-0.000	9.673
1005.3	82.0	.0069	5.852	5.847	5.849	-0.000	5.850
1005.3	82.8	.0069	5.852	5.847	5.849	-0.000	5.850
1005.3	82.7	.0106	9.444	9.497	9.471	-0.000	9.471
1005.3	82.6	.0131	12.167	12.238	12.203	-0.000	12.203
1005.3	82.6	.0156	14.833	14.924	14.878	-0.000	14.879
1001.3	82.1	.0203	20.105	20.303	20.204	-0.000	20.204
1001.3	81.5	.0251	26.247	26.381	26.313	-0.000	26.314
1001.3	80.8	.0296	32.215	32.412	32.313	-0.000	32.313
1001.3	80.1	.0343	38.414	38.628	38.521	-0.000	38.521
1001.3	79.4	.0392	45.193	45.195	45.194	-0.000	45.194
1001.3	78.7	.0437	51.373	52.148	51.760	-0.000	51.760

TARE DIFF. PRESS = -1.64000E-04 + -1.26930E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 58
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 23F TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA ACQUIRED AFTER 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. FLOW IN REVERSE DIRECTION. TEST SPECIMEN (S/N 023) INLET PRESSURE = 1000 PSIA NOMINAL.

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	SCFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
70.677	1005.3	299.9	26.8	80.2	82.0	.0432	2.897	5.704	12.574	3.5750	50.849
70.677	1005.3	299.5	26.3	79.3	78.7	.0388	2.608	5.135	11.322	3.1582	44.920
70.677	1005.3	299.4	26.2	79.2	64.8	.0343	2.303	4.535	9.999	2.7124	38.579
70.677	1005.3	299.4	26.2	79.2	55.9	.0296	1.990	3.918	8.639	2.2597	32.140
70.677	1005.3	299.6	26.4	79.5	46.9	.0250	1.678	3.303	7.282	1.8338	26.083
70.677	1005.3	299.8	26.6	79.9	38.5	.0206	1.381	2.720	5.996	1.4388	20.464
70.677	1005.3	300.1	26.9	80.5	28.7	.0155	1.041	2.050	4.519	1.0319	14.677
70.677	1005.3	300.4	27.2	81.0	24.0	.0130	.874	1.721	3.794	.8438	12.002
70.677	1005.3	300.7	27.5	81.5	19.9	.0108	.725	1.427	3.146	.6800	9.673
70.677	1005.3	301.0	27.8	82.0	12.5	.0069	.461	.909	2.003	.4113	5.850
70.677	1005.3	301.4	28.2	82.8	12.5	.0069	.461	.907	2.001	.4113	5.850
70.677	1005.3	301.4	28.2	82.7	19.4	.0106	.708	1.393	3.072	.6659	9.471
70.677	1005.3	301.3	28.1	82.6	24.1	.0131	.877	1.727	3.807	.8580	12.203
70.677	1005.3	301.3	28.1	82.6	29.0	.0156	1.044	2.055	4.530	1.0461	14.879
70.398	1001.3	301.0	27.8	82.1	37.6	.0203	1.352	2.663	5.870	1.4205	20.204
70.398	1001.3	300.7	27.5	81.5	46.9	.0251	1.675	3.297	7.270	1.8500	26.314
70.398	1001.3	300.3	27.1	80.8	55.7	.0298	1.986	3.911	8.622	2.2719	32.313
70.398	1001.3	299.9	26.7	80.1	64.6	.0343	2.292	4.512	9.948	2.7083	38.521
70.398	1001.3	299.5	26.4	79.4	74.2	.0392	2.623	5.164	11.385	3.1775	45.194
70.398 *****	1001.3 *****	299.1 *****	26.0 *****	78.7 *****	83.0	.0437	2.927	5.764	12.707	3.6391	51.760
70.593	1004.1	300.3	27.1	80.8							
.117	1.7	.7	.7	1.2	DEVIATIONS						

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TABLE 59
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 23IR TEST DESCRIPTION

CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA ACQUIRED ~~AFTER 10 HIGH PRESSURE~~ (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. FLOW IN REVERSE DIRECTION. ~~TEST SPECIMEN (S/N-023)~~ INLET PRESSURE = 415 PSIA NOMINAL.

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.83	50.2	83.4	.80	48.3	84.8	416.2	84.1	.1003
.78	50.1	83.2	.81	48.3	84.8	415.6	84.0	.0942
.69	50.1	82.9	.71	48.7	84.7	415.6	83.8	.0831
.60	50.4	82.5	.60	49.3	84.3	414.3	83.4	.0726
.51	49.9	82.2	.50	49.1	84.1	414.3	83.2	.0605
.42	50.2	82.2	.41	49.9	84.1	414.3	83.2	.0497
.31	50.2	82.2	.30	49.9	84.1	414.3	83.2	.0372
.27	50.2	82.2	.26	49.9	84.2	414.3	83.2	.0317
.22	50.2	82.2	.20	49.9	84.2	414.3	83.2	.0254
.14	50.6	82.4	.13	50.4	84.3	414.3	83.3	.0168
.14	50.4	82.5	.13	50.2	84.4	414.3	83.4	.0168
.21	50.1	82.5	.20	49.9	84.3	414.3	83.4	.0253
.27	50.1	82.3	.26	49.9	84.3	414.3	83.3	.0321
.32	50.1	82.2	.31	49.7	84.2	414.3	83.2	.0376
.41	50.1	82.0	.41	49.5	84.0	413.7	83.0	.0494
.51	49.9	81.8	.51	49.1	83.9	413.3	82.8	.0606
.60	50.1	81.7	.60	48.9	83.6	413.3	82.7	.0717
.69	50.1	81.7	.71	48.7	83.5	412.4	82.6	.0837
.76	49.9	81.7	.81	48.3	83.4	411.7	82.5	.0948
.83	50.1	82.1	.87	48.3	83.4	411.7	82.7	.1014

TABLE 59
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 2SIR TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA ACQUIRED AFTER 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. FLOW IN REVERSE DIRECTION. TEST SPECIMEN (S/N-023) INLET PRESSURE = 415 PSIA NOMINAL.

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
416.6	84.1	.1013	283.912	283.912	283.912	.001	283.911
415.6	84.0	.0942	241.878	241.878	241.878	.001	241.877
415.6	83.8	.0831	190.995	190.994	190.995	.001	190.994
414.3	83.4	.0726	153.702	153.702	153.702	.001	153.701
414.3	83.2	.0645	117.989	117.989	117.989	.000	117.988
414.3	83.2	.0497	89.993	90.178	90.085	.000	90.084
414.3	83.2	.0372	62.697	62.998	62.847	.000	62.846
414.3	83.2	.0317	51.419	51.936	51.678	.000	51.676
414.3	83.2	.0254	39.949	40.687	40.014	.000	40.012
414.3	83.3	.0168	24.818	24.850	24.834	.000	24.832
414.3	83.4	.0168	24.702	24.850	24.776	.000	24.774
414.3	83.4	.0253	39.998	40.260	40.129	.000	40.128
414.3	83.3	.0321	52.797	53.517	53.157	.000	53.156
414.3	83.2	.0376	64.199	64.578	64.389	.000	64.387
413.7	83.0	.0494	89.993	90.810	90.402	.000	90.400
413.0	82.8	.0606	119.886	119.886	119.886	.000	119.884
413.0	82.7	.0717	153.070	153.070	153.070	.001	153.069
412.4	82.6	.0837	195.104	195.104	195.104	.001	195.103
411.7	82.5	.0948	249.779	249.779	249.779	.001	249.778
411.1	82.7	.1014	300.346	300.346	300.346	.001	300.345

TARE DIFF. PRESS = -3.40000E-05 + -4.44000E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 59
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 23IR TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA ACQUIRED AFTER 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. FLOW IN REVERSE DIRECTION. TEST SPECIMEN (S/N 023) INLET PRESSURE = 415 PSIA NOMINAL.

TEST SPECIMEN INLET CONDITIONS									NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE					
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN_2 KG/HR	GN_2 LBS/HR	KG/SQ-CM DIFFERENTIAL	PSID
29.265	+13.7	302.1	28.9	84.1	78.4	.1013	2.767	5.449	12.013	19.9609	283.911
29.219	+13.9	302.1	28.9	84.0	73.5	.0942	2.596	5.116	11.269	17.0056	241.877
29.219	+13.9	302.1	28.9	83.8	64.9	.0831	2.291	4.511	9.944	13.4282	190.994
29.168	+14.1	301.7	28.5	83.4	56.5	.0726	1.996	3.930	8.665	10.8062	153.701
29.129	+14.3	301.9	28.4	83.2	47.1	.0605	1.664	3.277	7.225	8.2954	117.988
29.128	+14.3	301.9	28.4	83.2	38.7	.0497	1.366	2.689	5.928	6.3335	90.08
29.128	+14.3	301.6	28.4	83.2	28.9	.0372	1.022	2.013	4.437	4.4185	62.846
29.128	+14.3	301.6	28.5	83.2	24.6	.0317	.870	1.714	3.779	3.6332	51.674
29.128	+14.3	301.6	28.5	83.2	19.8	.0254	.699	1.376	3.034	2.8131	40.012
29.128	+14.3	301.7	28.5	83.3	13.1	.0168	.462	.910	2.007	1.7459	24.837
29.128	+14.3	301.7	28.6	83.4	13.0	.0164	.460	.907	1.999	1.7418	24.779
29.128	+14.3	301.7	28.5	83.4	19.7	.0253	.695	1.368	3.015	2.8213	40.125
29.129	+14.3	301.7	28.5	83.3	25.0	.0321	.883	1.738	3.832	3.7372	53.15
29.128	+14.3	301.6	28.4	83.2	29.3	.0376	1.035	2.038	4.493	4.5269	64.387
29.063	+13.7	301.6	28.3	83.1	38.4	.0494	1.356	2.669	5.885	6.3558	90.400
29.137	+13.8	301.4	28.2	82.8	47.1	.0606	1.663	3.274	7.218	8.4287	119.88
29.057	+13.8	301.3	28.1	82.7	55.7	.0717	1.966	3.872	8.536	10.7618	153.069
28.991	+12.4	301.3	28.1	82.6	64.9	.0837	2.293	4.519	9.956	13.7171	195.103
28.946	+11.7	301.2	28.1	82.5	73.4	.0946	2.592	5.109	11.254	17.5611	249.774
28.946 *****	+11.7 *****	301.3 *****	28.2 ******	82.7 ******	78.5	.1014	2.772	5.459	12.034	21.1163	300.345
29.139	+14.1	301.6	28.5	83.2							
.001	.2	.2	.2	.3	DEVIATIONS						

TABLE 60
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 23JR TEST DESCRIPTION

CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA ~~ACQUIRED AFTER 10 HIGH PRESSURE~~ (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. FLOW IN REVERSE DIRECTION. ~~TEST SPECIMEN (S/N 023)~~ INLET PRESSURE = 1000 PSIA NOMINAL.

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.87	50.4	76.7	.92	48.3	82.4	1011.9	79.5	.0435
.77	50.2	76.0	.81	48.5	81.7	1007.9	78.9	.0388
.69	50.4	75.7	.71	48.9	81.3	1007.9	78.5	.0345
.60	50.0	75.7	.61	49.5	81.1	1007.9	78.4	.0301
.50	50.4	75.9	.50	49.7	81.2	1007.9	78.6	.0250
.41	50.1	76.6	.40	49.5	81.6	1011.9	79.0	.0200
.32	49.9	77.0	.30	49.5	81.7	1007.9	79.4	.0153
.26	50.2	77.7	.25	49.9	82.1	1011.9	79.9	.0128
.22	50.1	78.4	.21	49.9	82.5	1015.9	80.5	.0104
.15	49.7	79.1	.13	49.5	82.9	1015.9	81.0	.0069
.15	50.4	80.1	.13	50.2	83.4	1015.9	81.7	.0070
.22	50.2	80.1	.20	50.0	83.4	1015.9	81.8	.0104
.28	50.2	80.0	.26	49.9	83.4	1015.9	81.7	.0132
.32	49.9	79.8	.31	49.5	83.4	1015.9	81.6	.0155
.42	50.1	79.3	.41	49.5	83.2	1015.9	81.2	.0203
.51	49.9	78.6	.51	49.1	82.9	1015.9	80.8	.0247
.60	50.4	77.7	.61	49.5	82.4	1015.9	80.1	.0299
.69	50.4	76.9	.70	49.1	81.6	1015.9	79.3	.0341
.78	50.2	76.2	.81	48.7	81.3	1015.9	78.7	.0387
.86	50.2	75.5	.91	48.3	80.6	1007.9	78.0	.0434

TABLE 60
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART P3JR TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA ACQUIRED AFTER 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. FLOW IN REVERSE DIRECTION. TEST SPECIMEN (S/N 023) INLET PRESSURE = 1000 PSIA NOMINAL.

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1011.2	79.5	.0435	78.585	79.327	78.956	-0.000	78.956
1007.9	78.9	.0388	68.118	68.897	68.508	-0.000	68.508
1007.9	78.5	.0345	59.479	60.048	59.764	-0.000	59.764
1007.9	78.4	.0301	50.331	50.883	50.607	-0.000	50.607
1007.9	78.6	.0256	40.404	41.401	40.902	-0.000	40.902
1011.2	79.0	.0200	32.002	32.258	32.130	-0.000	32.130
1007.9	79.4	.0153	23.601	23.703	23.652	-0.000	23.652
1011.9	79.9	.0128	19.429	19.520	19.475	-0.000	19.475
1015.9	80.5	.0114	15.256	15.343	15.300	-0.000	15.301
1015.2	81.0	.0069	9.695	9.745	9.720	-0.000	9.720
1015.9	81.7	.0070	9.927	10.030	9.979	-0.000	9.979
1015.9	81.8	.0114	15.431	15.572	15.502	-0.000	15.502
1015.9	81.7	.0142	20.298	20.437	20.367	-0.000	20.368
1015.9	81.6	.0155	24.354	24.506	24.430	-0.000	24.430
1015.9	81.2	.0203	32.871	33.063	32.967	-0.000	32.967
1015.9	80.8	.0247	41.563	41.817	41.690	-0.000	41.690
1015.9	80.1	.0299	51.383	51.531	51.457	-0.000	51.457
1015.9	79.3	.0341	59.479	60.048	59.764	-0.000	59.764
1015.9	78.7	.0387	69.493	70.162	69.827	-0.000	69.827
1007.9	78.0	.0434	78.833	79.643	79.238	-0.000	79.238

TARE DIFF. PRESS = -1.64000E-04 + -1.26930E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 60
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 23JR TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA ACQUIRED AFTER 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES. FLOW IN REVERSE DIRECTION. TEST SPECIMEN (S/N 023) INLET PRESSURE = 1000 PSIA NOMINAL.

TEST SPECIMEN INLET CONDITIONS									NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE					
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
71.144	1011.7	299.6	26.4	79.5	83.2	.0435	2.939	5.781	12.759	5.5512	78.956
70.865	1007.7	299.2	26.0	78.9	74.0	.0388	2.614	5.141	11.346	4.8166	68.508
70.865	1007.7	299.0	25.8	78.5	66.0	.0345	2.330	4.588	10.115	4.2018	59.764
70.865	1007.7	298.9	25.8	78.4	57.5	.0301	2.031	3.999	8.817	3.5581	50.607
70.865	1007.7	299.0	25.9	78.6	47.8	.0250	1.687	3.321	7.322	2.8757	40.902
71.144	1011.7	299.3	26.1	79.0	38.3	.0200	1.351	2.661	5.866	2.2590	32.130
70.865	1007.7	299.5	26.3	79.4	29.2	.0153	1.030	2.028	4.471	1.6629	23.652
71.144	1011.7	299.8	26.6	79.9	24.6	.0128	.867	1.708	3.765	1.3692	19.475
71.423	1015.7	300.1	26.9	80.5	19.9	.0104	.704	1.386	3.056	1.0757	15.301
71.423	1015.7	300.4	27.2	81.0	13.1	.0069	.464	.914	2.014	.6834	9.720
71.423	1015.7	300.8	27.6	81.7	13.4	.0070	.473	.932	2.054	.7016	9.979
71.423	1015.7	300.8	27.7	81.8	19.9	.0104	.702	1.382	3.048	1.0899	15.502
71.423	1015.7	300.8	27.6	81.7	25.4	.0132	.895	1.763	3.887	1.4320	20.368
71.423	1015.7	300.7	27.5	81.6	29.7	.0155	1.048	2.064	4.550	1.7176	24.430
71.423	1015.7	300.5	27.3	81.2	38.8	.0203	1.371	2.700	5.953	2.3178	32.967
71.423	1015.7	300.2	27.1	80.8	47.4	.0247	1.675	3.298	7.271	2.9311	41.690
71.423	1015.7	299.9	26.7	80.1	57.4	.0299	2.027	3.991	8.799	3.6178	51.457
71.423	1015.7	299.5	26.3	79.3	65.5	.0341	2.313	4.555	10.043	4.2018	59.764
71.423	1015.7	299.1	25.9	78.7	74.6	.0387	2.634	5.187	11.435	4.9094	69.827
70.865 *****	1007.7 *****	298.7 *****	25.6 ******	78.0 ******	83.1	.0434	2.934	5.779	12.734	5.5710	79.238
71.214	1012.7	299.8	26.6	79.9							
.230	3.3	.6	.6	1.1	DEVIATIONS						

TABLE 61

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 7/23/76

TEST NUMBER 6 PART SF TEST DESCRIPTION CLEAN CONDITION- IMPACT/FLOW RATE VERSUS DIFFERENTIAL PRESSURE. PRIOR TO IMPACT DATA. TEST SPECIMEN (S/N 024) INLET PRESSURE=415 PSIA (NOMINAL)

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS:		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSI_A)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSI_A)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.47	49.7	84.1	.48	48.9	84.3	416.6	83.6	.0566
.44	50.4	84.1	.44	49.9	84.3	416.3	83.6	.0529
.40	50.1	84.1	.41	49.5	84.1	416.4	83.6	.0487
.35	50.4	84.1	.35	49.9	84.1	416.3	83.6	.0457
.31	50.2	84.1	.31	49.9	84.3	416.4	83.6	.0368
.26	49.9	84.3	.25	49.5	84.4	416.4	83.8	.0306
.21	50.2	84.5	.20	49.9	84.6	416.4	84.1	.0249
.16	50.4	84.5	.15	50.2	84.6	416.4	84.1	.0190
.12	50.2	83.8	.11	50.1	84.8	416.3	84.3	.0134
.12	50.1	84.7	.11	49.9	84.6	416.6	84.2	.0133
.16	49.9	84.7	.16	49.9	84.7	416.6	84.2	.0195
.21	49.9	84.7	.21	49.7	84.7	416.6	84.2	.0253
.26	49.7	84.6	.26	49.3	84.7	416.3	84.2	.0312
.31	49.7	84.6	.30	49.3	84.8	416.4	84.2	.0363
.35	49.9	84.5	.35	49.3	84.7	416.4	84.1	.0402
.40	49.9	84.5	.41	49.3	84.7	416.3	84.1	.0482
.44	49.7	84.6	.44	49.7	84.7	416.4	84.2	.0523
.48	49.7	84.7	.48	48.9	84.7	415.3	84.2	.0569

TABLE 61

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

CLEAN CONDITION- IMPACT/FLOW RATE VERSUS DIFFERENTIAL PRESSURE. PRIOR TO IMPACT DATA. TEST SPECIMEN (S/N 024)

TEST NUMBER 6 PART 3E TEST DESCRIPTION INLET PRESSURE = 415 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
416.0	83.6	.0566	296.502	296.502	296.502	.000	296.502
416.0	83.6	.0529	255.152	255.152	255.152	.000	255.151
416.0	83.6	.0487	218.536	218.536	218.536	.000	218.536
416.0	83.6	.0427	179.080	179.080	179.080	.000	179.079
416.0	83.6	.0368	144.674	144.674	144.674	.000	144.674
416.0	83.8	.0306	114.055	114.055	114.055	.000	114.055
416.0	84.1	.0249	87.687	88.172	87.889	.000	87.889
416.0	84.1	.0190	64.909	64.498	64.204	.000	64.203
416.0	84.3	.0134	44.843	44.615	44.729	-0.000	44.729
416.0	84.2	.0133	44.285	44.096	44.190	-0.000	44.190
416.0	84.2	.0195	65.409	66.392	65.901	.000	65.900
416.0	84.2	.0253	89.073	90.066	89.570	.000	89.569
416.0	84.2	.0312	116.896	116.896	116.896	.000	116.896
416.0	84.2	.0363	143.411	143.411	143.411	.000	143.411
416.0	84.1	.0422	177.817	177.817	177.817	.000	177.817
416.0	84.1	.0482	217.273	217.273	217.273	.000	217.273
416.0	84.2	.0523	255.152	255.152	255.152	.000	255.151
415.9	84.2	.0569	305.972	305.972	305.972	.000	305.971

TARE DIFF. PRESS = -3.40000E-05 + -4.44000E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 61

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

CLEANCONDITION-IMPACT/FLOW RATE VERSUS DIFFERENTIAL PRESSURE. PRIOR TO IMPACT DATA. TEST SPECIMEN (S/N 024)

TEST NUMBER 6 PART SE TEST DESCRIPTION INLET PRESSURE = 415 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS									NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE					
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.293	416.6	301.8	28.7	83.6	44.3	.0566	1.564	3.079	6.788	20.8461	296.502
29.247	416.0	301.8	28.7	83.6	47.2	.0529	1.460	2.875	6.338	17.9389	255.151
29.247	416.0	301.8	28.7	83.6	38.0	.0487	1.342	2.643	5.827	15.3646	218.536
29.247	416.0	301.8	28.7	83.6	34.1	.0427	1.178	2.319	5.112	12.5905	179.079
29.247	416.0	301.8	28.7	83.6	28.6	.0368	1.015	1.999	4.407	10.1715	144.673
29.247	416.0	301.9	28.8	83.8	23.6	.0306	.843	1.660	3.660	8.0189	114.055
29.247	416.0	302.1	28.9	84.1	19.1	.0249	.686	1.351	2.979	6.1792	87.889
29.247	416.0	302.1	28.9	84.1	14.5	.0190	.523	1.029	2.269	4.5139	64.203
29.247	416.0	302.2	29.1	84.3	10.0	.0134	.369	.727	1.602	3.1447	44.729
29.293	416.6	302.2	29.0	84.3	10.0	.0133	.368	.724	1.596	3.1069	44.190
29.293	416.6	302.2	29.0	84.2	16.1	.0195	.537	1.058	2.333	4.6333	65.900
29.293	416.6	302.2	29.0	84.2	19.5	.0253	.699	1.376	3.034	6.2973	89.569
29.247	416.0	302.1	29.0	84.2	24.2	.0312	.859	1.691	3.728	8.2186	116.896
29.247	416.0	302.2	29.0	84.2	26.1	.0363	1.000	1.969	4.340	10.0828	143.411
29.247	416.0	302.1	28.9	84.1	32.7	.0422	1.163	2.290	5.049	12.5018	177.817
29.247	416.0	302.1	28.9	84.1	37.5	.0482	1.328	2.614	5.763	15.2758	217.273
29.247	416.0	302.1	29.0	84.2	46.7	.0523	1.442	2.839	6.260	17.9389	255.151
29.201 *****	415.3 *****	302.2 *****	29.0 *****	84.2 *****	44.3	.0569	1.565	3.081	6.793	21.5119	305.971
29.254	416.1	302.0	28.9	84.0							
.017	.2	.1	.1	.2	DEVIATIONS						

TABLE 62

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 7/23/76

TEST NUMBER 6 PART 5D TEST DESCRIPTION CLEAN CONDITION-IMPACT/FLOW RATE VERSUS DIFFERENTIAL PRESSURE, PRIOR TO IMPACT DATA, TEST SPECIMEN (S/N 024). INLET PRESSURE = 700 PSIA NOMINAL

FLOWMETER ONE			FLOWMETER TWO			TEST SPECIMEN INLET CONDITIONS		
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.84	49.7	77.7	.91	47.8	76.5	700.0	74.1	.0608
.76	50.2	75.4	.81	48.5	75.4	700.0	73.9	.0552
.67	50.4	75.6	.71	49.1	75.5	700.0	74.1	.0489
.58	49.7	77.7	.60	48.7	76.7	700.0	74.2	.0416
.49	49.7	73.0	.50	48.9	76.1	700.0	74.5	.0348
.40	49.9	73.4	.40	49.3	76.2	700.0	74.8	.0280
.31	50.2	73.7	.31	49.9	76.5	700.0	75.1	.0220
.26	50.4	77.1	.25	50.1	76.7	700.0	75.4	.0183
.21	49.9	74.6	.20	49.9	77.0	700.0	75.8	.0147
.14	50.2	75.1	.14	50.1	77.3	700.0	76.2	.0100
.14	50.2	76.7	.14	50.1	78.2	703.9	77.3	.0099
.22	49.7	76.3	.21	49.5	78.2	703.9	77.2	.0151
.26	49.9	76.1	.26	49.7	78.2	703.9	77.1	.0186
.31	49.7	75.9	.31	49.3	78.2	703.9	77.1	.0216
.40	50.4	75.6	.40	49.9	78.2	703.9	76.9	.0284
.49	49.7	75.4	.50	48.9	78.0	700.0	76.5	.0347
.58	49.7	74.5	.61	48.7	77.7	700.0	76.1	.0414
.67	50.1	77.1	.71	48.7	77.9	700.0	76.0	.0484
.76	50.4	73.9	.81	48.7	77.1	700.0	75.4	.0554
.84	50.2	73.4	.91	48.3	76.5	700.0	75.0	.0616

TABLE 62

DATE: 7/23/76

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

CLEAN CONDITION-IMPACT/FLOW RATE VERSUS DIFFERENTIAL PRESSURE. PRIOR TO IMPACT DATA. TEST SPECIMEN (S/N 024)

TEST NUMBER 6 PART 3D TEST DESCRIPTION INLET PRESSURE=200 PSIA NOMINAL

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (LBM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
700.0	74.1	.0608	249.360	249.360	249.360	-0.000	249.360
700.0	73.9	.0552	217.440	217.440	217.440	-0.000	217.440
700.0	74.1	.0489	184.887	184.887	184.887	-0.000	184.887
700.0	74.2	.0416	151.070	151.070	151.070	-0.001	151.070
700.0	74.5	.0348	121.362	121.362	121.362	-0.001	121.362
700.0	74.8	.0280	92.917	93.866	93.391	-0.001	93.391
700.0	75.1	.0220	70.700	71.426	71.063	-0.001	71.063
700.0	75.4	.0183	57.056	57.836	57.446	-0.001	57.446
700.0	75.8	.0147	45.999	45.770	45.884	-0.001	45.884
700.0	76.2	.0100	30.540	30.221	30.380	-0.001	30.380
703.9	77.3	.0099	30.353	30.221	30.287	-0.001	30.287
703.9	77.2	.0151	47.548	47.091	47.319	-0.001	47.319
703.9	77.1	.0186	58.811	59.733	59.272	-0.001	59.272
703.9	77.1	.0216	69.941	71.116	70.531	-0.001	70.531
703.9	76.9	.0294	94.611	95.760	95.186	-0.001	95.186
700.0	76.5	.0347	121.046	121.046	121.046	-0.001	121.046
700.0	76.1	.0414	150.122	150.122	150.122	-0.001	150.122
700.0	76.0	.0484	183.623	183.623	183.623	-0.000	183.623
700.0	75.4	.0554	219.652	219.652	219.652	-0.000	219.652
700.0	75.0	.0616	255.049	255.049	255.049	.000	255.049

TARE DIFF. PRESS = -3.60000E-04 + -3.31610E-02 (ACFM) + 6.33359E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 62

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 7/23/76

TEST NUMBER 6 PART 2D TEST DESCRIPTION CLEAN CONDITION-IMPACT/FLOW RATE VERSUS DIFFERENTIAL PRESSURE. PRIOR TO IMPACT DATA. TEST SPECIMEN (S/N 024) INLET PRESSURE = 700 PSIA(NOMINAL)

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS.	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
49.212	700.0	296.6	23.4	74.1	82.9	.0688	2.871	5.653	12.463	17.5318	249.360
49.212	700.0	296.4	23.3	73.9	75.1	.0554	2.611	5.141	11.335	15.2875	217.440
49.212	700.0	296.5	23.4	74.1	66.4	.0489	2.313	4.553	10.039	12.9989	184.887
49.212	700.0	296.6	23.4	74.2	56.2	.0416	1.966	3.871	8.534	10.6213	151.070
49.212	700.0	296.8	23.6	74.5	46.7	.0348	1.645	3.238	7.139	8.5326	121.362
49.212	700.0	296.9	23.8	74.8	37.2	.0280	1.322	2.603	5.739	6.5661	93.391
49.212	700.0	297.1	24.0	75.1	29.3	.0220	1.037	2.042	4.502	4.9962	71.063
49.212	700.0	297.3	24.1	75.4	24.1	.0183	.860	1.694	3.735	4.0389	57.446
49.212	700.0	297.5	24.3	75.8	19.4	.0147	.694	1.367	3.014	3.2260	45.884
49.212	700.0	297.7	24.6	76.2	13.0	.0100	.471	.927	2.043	2.1359	30.380
49.489	703.9	298.3	25.2	77.3	13.0	.0099	.470	.925	2.039	2.1294	30.287
49.489	703.9	298.3	25.1	77.3	19.9	.0151	.711	1.400	3.086	3.3269	47.319
49.489	703.9	298.2	25.1	77.1	24.8	.0186	.881	1.734	3.823	4.1672	59.272
49.489	703.9	298.2	25.1	77.1	28.8	.0216	1.022	2.012	4.435	4.9588	70.531
49.489	703.9	298.1	24.9	76.9	38.0	.0284	1.341	2.640	5.821	6.6923	95.186
49.212	700.0	297.9	24.7	76.5	46.4	.0347	1.633	3.215	7.088	8.5104	121.046
49.212	700.0	297.6	24.5	76.1	55.8	.0414	1.950	3.840	8.466	10.5546	150.122
49.212	700.0	297.6	24.5	76.0	65.5	.0484	2.281	4.491	9.900	12.9100	183.623
49.212	700.0	297.3	24.1	75.4	75.1	.0554	2.611	5.141	11.334	15.4431	219.652
49.212 *****	700.0 *****	297.4 *****	24.3 *****	75.8 *****	83.9	.0616	2.906	5.722	12.614	17.9317	255.049
49.281	700.9	297.4	24.2	75.6							
.104	1.5	.5	.5	1.0	DEVIATIONS						

TABLE 63
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

CLEAN CONDITION-IMPACT/FLOW RATE VERSUS DIFFERENTIAL PRESSURE. PRIOR TO IMPACT DATA. TEST SPECIMEN (S/N 024) INLET PRESSURE = 1000 PSIA (NOMINAL)

TEST NUMBER 6 PART 3C TEST DESCRIPTION

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.83	50.3	67.0	.91	48.3	72.3	1007.9	69.6	.0425
.75	50.5	66.5	.81	48.7	71.9	1007.9	69.2	.0384
.67	50.3	66.3	.71	48.7	71.5	1007.9	68.9	.0338
.58	49.7	66.1	.61	48.3	71.1	996.3	68.7	.0295
.49	49.7	66.5	.50	48.9	71.3	1007.9	68.9	.0243
.40	50.1	67.1	.40	49.5	71.6	1007.9	69.4	.0198
.30	49.7	67.7	.30	49.3	71.9	1007.9	69.8	.0149
.26	49.9	68.5	.25	49.5	72.3	1007.9	70.4	.0126
.21	50.1	69.3	.20	49.9	72.6	1007.9	70.9	.0101
.13	49.9	69.9	.13	49.9	73.1	1007.9	71.4	.0065
.13	49.9	71.6	.13	49.9	73.8	1007.9	72.7	.0065
.21	49.7	71.4	.21	49.5	73.9	1007.9	72.7	.0104
.26	50.1	71.1	.26	49.9	73.9	1007.9	72.5	.0129
.30	49.5	71.7	.31	49.1	74.8	1007.9	73.3	.0149
.40	49.7	72.0	.40	49.1	73.6	1004.0	71.8	.0197
.49	50.1	69.2	.51	49.3	73.2	1004.0	71.2	.0247
.58	50.1	68..	.60	48.9	72.7	1004.0	70.5	.0292
.67	50.1	67.5	.71	48.7	72.1	1004.0	69.8	.0339
.75	50.5	66.7	.81	48.7	71.3	1004.0	69.0	.0384
.84	50.3	66.2	.91	48.3	72.6	1004.0	68.4	.0429

TABLE 63
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

CLEAN CONDITION- IMPACT FLOW RATE VERSUS DIFFERENTIAL PRESSURE. PRIOR TO IMPACT DATA. TEST SPECIMEN (S/N 024)

TEST NUMBER 6 PART 3C TEST DESCRIPTION INLET PRESSURE = 1000 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (LBM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1007.9	69.6	.0425	165.081	165.081	165.081	-0.000	165.082
1007.9	69.2	.384	145.487	145.487	145.487	-0.000	145.487
1007.9	68.9	.0398	125.260	125.260	125.260	-0.000	125.260
996.0	68.7	.0295	104.401	104.401	104.401	-0.000	104.401
1007.9	68.9	.0243	84.627	85.122	84.874	-0.000	84.874
1007.9	69.4	.0198	66.699	67.107	66.903	-0.000	66.903
1007.9	69.8	.0149	48.887	49.409	49.148	-0.000	49.148
1007.9	70.4	.0126	41.515	41.226	41.370	-0.000	41.371
1007.9	70.9	.0101	32.696	32.407	32.551	-0.000	32.552
1007.9	71.4	.0065	20.728	20.515	20.628	-0.000	20.628
1007.9	72.7	.0065	20.490	20.515	20.503	-0.000	20.503
1007.9	72.7	.0134	33.442	33.386	33.414	-0.000	33.414
1007.9	72.5	.0129	42.507	42.324	42.415	-0.000	42.415
1007.9	72.3	.0149	48.887	49.409	49.148	-0.000	49.148
1004.0	71.8	.0197	66.323	66.791	66.557	-0.000	66.557
1004.0	71.2	.0247	85.613	86.386	85.999	-0.000	85.999
1004.0	70.5	.0292	105.033	105.033	105.033	-0.000	105.033
1004.0	69.8	.0339	125.576	125.576	125.576	-0.000	125.576
1004.0	69.0	.0384	146.435	146.435	146.435	-0.000	146.435
1004.0	68.4	.0429	167.610	167.610	167.610	-0.000	167.610

TARE DIFF. PRESS = -1.64000E-04 + -1.26930E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 63
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 6 PART 2C TEST DESCRIPTION CLEAN CONDITION-IMPACT/FLOW RATE VERSUS DIFFERENTIAL PRESSURE, PRIOR TO IMPACT DATA. TEST SPECIMEN (S/N 024) INLET PRESSURE = 1000 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS
PRESSURE		TEMPERATURE			FLOW RATE					
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
70.865	1007.9	294.1	20.9	69.6	84.4	.0425	2.913	5.735	12.644	11.6054	165.082
70.865	1007.9	293.8	20.7	69.2	76.0	.0384	2.636	5.191	11.443	10.2287	145.487
70.865	1007.9	293.7	20.5	68.9	66.7	.0338	2.322	4.571	10.078	8.8066	125.260
70.029	996.0	293.6	20.4	68.7	57.3	.0295	2.001	3.940	8.687	7.3401	104.401
70.865	1007.9	293.7	20.5	68.9	47.5	.0243	1.673	3.293	7.261	5.9673	84.874
70.865	1007.9	293.9	20.8	69.4	38.4	.0198	1.360	2.679	5.903	4.7038	66.903
70.865	1007.9	294.2	21.0	69.8	28.9	.0149	1.025	2.019	4.451	3.4555	49.148
70.865	1007.9	294.5	21.3	70.4	24.2	.0126	.863	1.699	3.745	2.9086	41.371
70.865	1007.9	294.8	21.6	70.9	19.5	.0101	.694	1.367	3.014	2.2806	32.442
70.865	1007.9	295.1	21.9	71.4	12.4	.0065	.447	.879	1.939	1.4503	20.628
70.865	1007.9	295.8	22.6	72.7	12.2	.0065	.442	.871	1.921	1.4415	20.503
70.865	1007.9	295.8	22.6	72.7	19.9	.0104	.707	1.391	3.067	2.3492	33.414
70.865	1007.9	295.7	22.5	72.5	24.8	.0129	.881	1.735	3.826	2.9821	42.415
70.865	1007.9	295.5	22.4	72.3	28.8	.0149	1.020	2.008	4.426	3.4555	49.148
70.586	1004.0	295.3	22.1	71.8	38.1	.0197	1.343	2.645	5.831	4.6795	66.557
70.586	1004.0	294.9	21.8	71.2	47.9	.0247	1.681	3.310	7.298	6.0464	85.999
70.586	1004.0	294.6	21.4	70.5	56.9	.0292	1.990	3.919	8.640	7.3845	105.033
70.586	1004.0	294.2	21.1	69.8	66.6	.0339	2.313	4.555	10.043	8.8289	125.576
70.586	1004.0	293.7	20.6	69.0	75.7	.0384	2.628	5.175	11.409	10.2954	146.435
70.586	1004.0	293.4	20.2	68.4	84.9	.0429	2.940	5.788	12.761	11.7842	167.610
*****	*****	*****	*****	*****							
70.740	1006.2	294.5	21.3	70.4							
.163	2.3	.7	.7	1.2	DEVIATIONS						

TABLE 64
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 7-26-76

TEST NUMBER 6 PART 2I TEST DESCRIPTION

CLEAN CONDITION - IMPACT/FLOW RATE VERSUS DIFFERENTIAL PRESSURE. AFTER 80 HIGH PRESSURE (10,000 PSIA) GN_2 IMPACTS. TEST SPECIMEN (S/N 024) INLET PRESSURE = 415 PSIA NOMINAL.

FLOWMETER CONDITIONS

FLOWMETER ONE			FLOWMETER TWO			TEST SPECIMEN INLET CONDITIONS		
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE, (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP. (DEG. F)	AVG FLOW RATE (ACFM)
.81	42.1	78.5	.81	47.9	80.3	416.5	79.4	.0985
.76	42.2	78.3	.81	48.7	80.3	415.2	79.3	.0939
.68	42.4	78.1	.71	49.1	80.2	413.9	79.2	.0836
.59	42.4	78.0	.61	49.7	80.1	413.9	79.1	.0726
.50	42.6	77.9	.51	49.9	80.1	413.9	79.0	.0616
.41	42.6	78.0	.41	50.1	80.1	413.9	79.1	.0494
.31	42.4	78.6	.31	50.2	80.3	413.9	79.4	.0383
.26	42.6	78.6	.26	50.4	80.4	413.9	79.5	.0321
.22	42.7	81.8	.21	49.7	82.7	421.1	82.3	.0254
.15	42.1	81.9	.15	50.1	82.8	421.1	82.4	.0180
.15	42.1	82.0	.15	50.1	82.5	421.1	82.3	.0179
.22	42.1	81.8	.22	49.9	82.3	421.1	82.0	.0264
.27	42.9	81.7	.26	49.9	82.6	420.4	82.2	.0316
.32	42.1	81.7	.32	49.9	82.7	419.8	82.2	.0380
.41	42.9	81.4	.41	49.3	82.7	419.8	82.1	.0487
.50	42.1	81.1	.51	49.1	82.5	419.1	81.8	.0593
.59	42.7	81.9	.61	48.7	82.5	418.5	81.7	.0705
.68	42.1	81.7	.71	48.5	82.2	417.8	81.5	.0819
.76	42.5	81.7	.81	47.9	82.2	416.5	81.5	.0919
.81	42.5	81.1	.81	47.8	82.2	415.9	81.7	.0982

TABLE 64
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 7-26-76

TEST NUMBER 6 PART 2I

TEST DESCRIPTION: CLEAN CONDITION - IMPACT/FLOW RATE VERSUS DIFFERENTIAL PRESSURE. AFTER 80 HIGH PRESSURE (10,000 PSIA) GN_2 IMPACTS. TEST SPECIMEN (S/N 024) INLET PRESSURE = 415 PSIA NOMINAL.

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
416.9	79.4	.0985	298.980	298.980	298.980	.001	298.978
417.6	79.3	.0959	260.422	260.422	260.422	.001	260.421
413.7	79.2	.0836	205.430	205.430	205.430	.001	205.429
413.7	79.1	.0726	163.080	163.080	163.080	.001	163.078
413.7	79.-	.0616	127.683	127.683	127.683	.001	127.681
413.7	79.1	.0494	94.808	94.814	94.449	.000	94.447
413.7	79.4	.0383	68.911	69.530	69.220	.000	69.219
413.7	79.5	.0321	56.014	56.572	56.293	.000	56.292
461.1	82.3	.0254	43.346	44.526	43.936	.000	43.935
461.1	82.4	.0180	29.858	30.760	30.310	.000	30.309
461.1	82.3	.0179	30.139	30.992	30.565	.000	30.548
461.1	82.-	.0204	45.501	47.091	46.297	.000	46.298
460.7	82.2	.0316	57.142	58.152	57.647	.000	57.646
419.0	82.2	.0380	70.666	71.426	71.046	.000	71.042
417.0	82.1	.0487	96.710	96.710	96.710	.000	96.709
417.1	81.8	.0595	125.154	125.154	125.154	.000	125.153
416.9	81.7	.0705	159.919	159.919	159.919	.001	159.918
417.0	81.6	.0819	201.637	201.637	201.637	.001	201.636
416.9	81.6	.0919	248.412	248.412	248.412	.001	248.411
416.7	81.7	.0982	291.078	291.078	291.078	.001	291.077

TARE DIFF. PRESS = -3.44000E-05 + -4.44000E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 64
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 7-26-76

TEST NUMBER 6 PART 2I

TEST DESCRIPTION: CLEAN CONDITION - IMPACT/FLOW RATE VERSUS DIFFERENTIAL PRESSURE. AFTER 80 HIGH PRESSURE (10,000 PSIA) GN_2 IMPACTS. TEST SPECIMEN (S/N 024) INLET PRESSURE = 415 PSIA NOMINAL.

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	CFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.284	416.5	299.5	26.3	79.4	79.0	.0985	2.742	5.092	11.903	21.0203	298.978
29.196	415.5	299.4	26.3	79.3	74.9	.0939	2.608	5.134	11.319	18.3094	260.421
29.111	413.3	299.4	26.2	79.2	66.3	.0836	2.314	4.459	10.043	14.4431	205.429
29.101	413.2	299.3	26.1	79.1	57.6	.0726	2.010	3.858	8.728	11.4656	163.078
29.101	413.2	299.3	26.1	79.0	48.4	.0616	1.705	3.285	7.400	8.9769	127.681
29.101	413.2	299.3	26.2	79.1	38.6	.0494	1.368	2.699	5.938	6.6403	94.447
29.101	413.2	299.5	26.3	79.4	29.9	.0383	1.059	2.089	4.596	4.8666	69.219
29.101	413.2	299.6	26.4	79.5	24.9	.0321	.888	1.747	3.856	3.9577	56.292
29.804	423.4	301.1	27.9	82.3	19.9	.0254	.712	1.402	3.091	3.0889	43.935
29.804	423.4	301.1	28.0	82.4	14.0	.0180	.505	.994	2.192	2.1309	30.309
29.804	423.4	301.1	27.9	82.3	13.9	.0179	.502	.987	2.179	2.1477	30.548
29.804	423.4	301.0	27.8	82.0	20.7	.0264	.739	1.459	3.208	3.2550	46.298
29.668	422.0	301.0	27.9	82.2	24.9	.0316	.884	1.740	3.835	4.0529	57.646
29.516	419.9	301.1	27.9	82.2	30.0	.0380	1.059	2.088	4.599	4.9947	71.042
29.516	419.9	301.1	27.8	82.1	38.3	.0487	1.359	2.679	5.901	6.7993	96.709
29.469	419.4	300.8	27.7	81.8	46.9	.0593	1.653	3.259	7.175	8.7991	125.153
29.421	418.9	300.7	27.6	81.7	56.0	.0705	1.964	3.869	8.524	11.2434	159.918
29.379	418.5	300.6	27.5	81.5	65.4	.0819	2.279	4.487	9.892	14.1764	201.696
29.284	416.9	300.0	27.0	81.5	73.3	.0919	2.549	5.017	11.065	17.4650	248.411
29.238 *****	416.2 *****	301.0 *****	27.8 ******	81.7 ******	78.2	.0982	2.717	5.347	11.794	20.4648	291.077
29.343	417.7	300.3	27.1	80.9							
.183	2.6	.7	.7	1.3	DEVIATIONS						

TABLE 65

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 6 PART 3H TEST DESCRIPTION CLEAN CONDITION - IMPACT/FLOW RATE VERSUS DIFFERENTIAL PRESSURE. AFTER 80 HIGH PRESSURE (10,000 PSIA) GN_2 IMPACTS. TEST SPECIMEN (S/N 024) INLET PRESSURE = 700 PSIA NOMINAL.

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESS. RE (PSIA)	TEMP (DEG. F)	FLOW R TE (ACFM)	PRESSURE, (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.85	[illegible]	73.7	.91	47.9	76.8	703.9	75.2	.0610
.76	[illegible]	73.2	.81	48.7	76.3	703.9	74.8	.0550
.67	[illegible]	73.1	.70	49.1	76.2	703.9	74.7	.0485
.58	[illegible]	73.1	.60	49.5	76.3	703.9	74.7	.0421
.50	[illegible]	73.3	.51	49.9	76.3	700.0	74.8	.0359
.41	[illegible]	73.6	.41	49.9	76.5	700.0	75.1	.0295
.31	[illegible]	74.2	.31	49.7	76.8	703.9	75.5	.0221
.27	[illegible]	74.5	.26	49.9	77.0	703.9	75.7	.0189
.22	[illegible]	74.7	.21	49.3	77.3	703.9	76.1	.0152
.14	[illegible]	75.5	.13	49.3	77.7	703.9	76.6	.0096
.14	[illegible]	76.8	.13	50.1	78.3	703.9	77.6	.0098
.22	[illegible]	76.9	.22	50.1	78.5	703.9	77.7	.0157
.26	[illegible]	76.8	.26	50.2	78.7	703.9	77.8	.0186
.32	[illegible]	76.7	.31	50.1	78.7	703.9	77.7	.0225
.41	[illegible]	76.4	.41	49.7	78.7	703.9	77.5	.0291
.50	[illegible]	76.1	.51	48.9	78.6	703.9	77.3	.0353
.59	[illegible]	75.7	.61	48.9	78.5	703.9	77.1	.0418
.68	[illegible]	75.4	.71	48.3	78.2	703.9	76.8	.0484
.76	[illegible]	75.1	.81	47.8	78.0	700.0	76.5	.0546
.84	[illegible]	74.7	.91	47.8	77.7	700.0	76.2	.0610

TABLE 65

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 6 PART 2H

TEST DESCRIPTION CLEAN CONDITION - IMPACT/FLOW RATE VERSUS DIFFERENTIAL PRESSURE. AFTER 80 HIGH PRESSURE (10,000 PSIA) GN_2 IMPACTS. TEST SPECIMEN (S/N 024) INLET PRESSURE = 700 PSIA NOMINAL.

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
703.9	75.2	.0610	124.206	124.206	124.206	-0.000	124.206
703.9	74.8	.0550	108.720	108.720	108.720	-0.000	108.720
703.9	74.7	.0485	91.746	92.918	92.332	-0.000	92.332
703.9	74.7	.0421	77.344	78.063	77.704	-0.001	77.704
700.9	74.8	.0359	63.486	63.841	63.664	-0.001	63.664
700.9	75.1	.0298	50.581	51.199	50.890	-0.001	50.890
703.9	75.3	.0221	37.999	37.889	37.944	-0.001	37.944
703.9	75.7	.0189	32.095	31.906	32.001	-0.001	32.001
703.9	76.1	.0152	25.498	25.303	25.401	-0.001	25.401
703.9	76.6	.0097	16.268	16.026	16.147	-0.001	16.147
703.9	77.6	.0098	16.393	16.369	16.381	-0.001	16.381
703.9	77.7	.0157	26.993	26.910	26.951	-0.001	26.951
703.9	77.8	.0196	32.469	32.423	32.446	-0.001	32.446
703.9	77.7	.0225	39.923	39.790	39.857	-0.001	39.857
703.9	77.5	.0291	51.832	52.464	52.148	-0.001	52.148
703.9	77.1	.0359	64.613	65.106	64.859	-0.001	64.859
703.9	77.1	.0418	78.461	79.012	78.736	-0.001	78.736
703.9	76.8	.0484	92.961	93.866	93.413	-0.000	93.413
700.9	76.5	.0546	107.140	107.140	107.140	-0.000	107.140
700.9	76.2	.0611	123.890	123.890	123.890	-0.000	123.890

TARE DIFF. PRESS = -3.60000E-04 + -3.31610E-02 (ACFM) + 6.33369E+01 (ACFM)**2 + 0 (ACFM)**3

TABLE 65

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 6 PART 2H TEST DESCRIPTION CLEAN CONDITION - IMPACT/FLOW RATE VERSUS DIFFERENTIAL PRESSURE. AFTER 80 HIGH PRESSURE (10,000 PSIA) GN_2 IMPACTS. TEST SPECIMEN (S/N 024) INLET PRESSURE = 700 PSIA NOMINAL.

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	CFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
49.489	703.7	297.2	24.	75.2	83.3	.0610	2.891	5.699	12.550	8.7326	124.206
49.489	703.7	296.9	23.8	74.8	75.2	.0550	2.610	5.138	11.329	7.6438	108.720
49.489	703.7	296.9	23.7	74.7	65.9	.0485	2.301	4.530	9.987	6.4916	92.332
49.489	703.7	296.9	23.7	74.7	56.9	.0421	1.997	3.931	8.667	5.4631	77.704
49.212	700.0	297.0	23.8	74.8	48.2	.0359	1.694	3.337	7.356	4.4760	63.664
49.212	700.0	297.1	23.9	75.1	39.1	.0295	1.390	2.737	6.034	3.5779	50.890
49.489	703.7	297.3	24.2	75.5	29.5	.0221	1.046	2.057	4.540	2.6677	37.944
49.489	703.7	297.5	24.3	75.7	23.0	.0169	.893	1.758	3.876	2.2499	32.001
49.489	703.7	297.7	24.5	76.1	20.2	.0152	.719	1.418	3.121	1.7858	25.401
49.489	703.7	297.9	24.8	76.6	12.5	.0096	.455	.899	1.975	1.1352	16.147
49.489	703.7	298.0	25.0	77.0	10.7	.0098	.460	.909	1.998	1.1517	16.381
49.489	703.7	298.6	25.4	77.7	20.6	.0157	.739	1.459	3.209	1.8949	26.951
49.489	703.7	298.6	25.4	77.8	24.6	.0186	.879	1.734	3.817	2.2812	32.446
49.489	703.7	298.5	25.4	77.7	29.9	.0225	1.061	2.098	4.606	2.8022	39.857
49.489	703.7	298.5	25.3	77.5	38.8	.0291	1.376	2.720	5.972	3.6664	52.148
49.489	703.7	298.3	25.2	77.3	47.3	.0353	1.669	3.298	7.246	4.5601	64.859
49.489	703.7	298.2	25.1	77.1	56.5	.0418	1.977	3.909	8.580	5.5357	78.736
49.489	703.7	298.1	24.9	76.8	65.6	.0484	2.287	4.520	9.928	6.5676	93.413
49.212	700.0	297.9	24.7	76.5	73.8	.0546	2.567	5.059	11.144	7.5327	107.140
49.212	700.0	297.7	24.6	76.2	82.8	.0610	2.872	5.659	12.467	8.7103	123.890
*****	*****	*****	******	******							
49.433	703.1	297.8	24.6	76.3							
.088	1.2	.5	.5	1.0	DEVIATIONS						

TABLE 66
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 6 PART 20 TEST DESCRIPTION CLEAN CONDITION. - IMPACT/FLOW RATE VERSUS DIFFERENTIAL PRESSURE. AFTER 80 HIGH PRESSURE (10,000 PSIA) GN_2 IMPACTS. TEST SPECIMEN (S/N 024) INLET PRESSURE = 1000 PSIA NOMINAL.

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.84	47.5	68.7	.91	47.5	73.8	1007.9	71.2	.0419
.75	47.4	68.7	.81	48.8	73.7	1007.9	71.2	.0384
.67	47.4	69.3	.71	49.0	74.0	1007.9	71.6	.0337
.59	47.6	69.7	.61	49.8	74.3	1007.9	72.0	.0298
.49	47.2	70.6	.51	49.6	74.8	1007.9	72.7	.0248
.40	47.1	71.2	.41	49.6	75.2	1007.9	73.2	.0200
.31	47.4	71.8	.31	50.0	75.5	1007.9	73.7	.0155
.26	47.2	72.6	.26	50.0	76.0	1007.9	74.3	.0131
.22	47.9	73.4	.21	49.8	76.4	1007.9	74.9	.0105
.15	47.2	74.3	.14	50.2	76.9	1007.9	75.6	.0072
.15	47.2	75.7	.14	50.2	77.6	1007.9	76.6	.0072
.22	47.5	75.5	.22	49.2	77.7	1007.9	76.6	.0109
.27	47.5	75.3	.27	49.2	77.7	1007.9	76.5	.0130
.32	47.5	74.8	.31	49.2	77.7	1007.9	76.3	.0154
.41	47.7	74.1	.41	49.2	77.5	1007.9	75.8	.0202
.50	47.1	73.2	.51	49.4	77.2	1007.9	75.2	.0249
.58	47.9	72.1	.61	48.8	76.6	1007.9	74.4	.0291
.67	47.9	71.2	.71	48.5	76.0	1007.9	73.7	.0337
.76	47.5	70.6	.81	47.9	75.5	1004.0	73.0	.0381
.85	47.9	69.7	.92	47.9	74.7	1004.0	72.2	.0429

TABLE 66
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

CLEAN CONDITION - IMPACT/FLOW RATE VERSUS DIFFERENTIAL PRESSURE. AFTER 80 HIGH PRESSURE (1,000 PSIA) GN_2 IMPACTS. TEST SPECIMEN (S/N 024) INLET PRESSURE = 1000 PSIA NOMINAL.

TEST NUMBER 6 PART 2B TEST DESCRIPTION

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1007.X	71.2	.0419	86.653	87.334	86.994	=0.000	86.994
1007.X	71.2	.384	77.758	78.485	78.121	=0.000	78.122
1007.X	71.6	.0337	66.533	67.1 7	66.820	=0.000	66.820
1007.X	72.0	.0298	57.139	57.942	57.540	=0.000	57.541
1007.X	72.7	.0248	47.428	46.880	47.154	=0.000	47.154
1007.X	73.2	.0200	37.207	3 .988	37.097	=0.000	37.098
1007.X	73.7	.0155	28.389	28.019	28.204	=0.000	28.205
1007.X	74.3	.0131	23.786	23.431	23.608	=0.000	23.609
1007.X	74.9	.0105	18.928	18.677	18.802	=0.000	18.803
1007.X	75.6	.0072	12.941	12.736	12.836	=0.000	12.836
1007.X	75.6	.0072	12.879	12.8 5	12.866	=0.000	12.862
1007.X	76.6	.0109	19.925	19.879	19.902	=0.000	19.902
1007.X	76.5	.0130	24.161	24.118	24.139	=0.000	24.139
1007.X	76.3	.0154	28.949	28.938	28.943	=0.000	28.944
1007.X	75.8	.02 2	38.385	38.254	38.320	=0.000	38.320
1007.X	75.2	.0249	48.665	48.144	48.405	=0.000	48.405
1007.X	74.4	.0291	56.888	57.626	57.257	=0.000	57.257
1007.X	73.7	.037	67.283	67.739	67.511	=0.000	67.511
1004.X	73.1	.0381	76.888	77.537	77.212	=0.000	77.213
1004.X	72.2	.429	88.737	89.546	89.141	=0.000	89.142

TARE DIFF. PRESS = -1.84000E-04 + -1.24930E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 66
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 6 PART 2G TEST DESCRIPTION CLEAN CONDITION - IMPACT/FLOW RATE VERSUS DIFFERENTIAL PRESSURE. AFTER 80 HIGH PRESSURE (10,000 PSIA) GN_2 IMPACTS. TEST SPECIMEN (S/N 024) INLET PRESSURE = 1000 PSIA NOMINAL.

TEST SPECIMEN INLET CONDITIONS									NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE					
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	SCFM	GN_2 KG/HR	GN_2 LBS/HR	KG/SQ-CM DIFFERENTIAL	PSID
70.865	1007.2	295.1	21.8	71.2	82.8	.419	2.866	5.643	6.1163	86.994
70.865	1007.2	294.9	21.8	71.2	75.9	.0384	2.630	5.179	5.4925	78.122
70.865	1007.2	295.2	22.1	71.6	66.4	.0337	2.306	4.540	4.6979	66.820
70.865	1007.2	295.4	22.2	72.0	58.4	.0298	2.035	4.007	4.0455	57.541
70.865	1007.2	295.8	22.6	73.7	48.1	.0248	1.691	3.330	3.3153	47.154
70.865	1007.2	296.0	22.9	73.2	38.6	.0200	1.363	2.684	2.6082	37.098
70.865	1007.2	296.3	23.2	73.7	29.8	.0155	1.053	2.074	1.9830	28.205
70.865	1007.2	296.7	23.5	74.3	25.0	.0131	.890	1.756	1.6599	23.609
70.865	1007.2	297.0	23.8	74.9	20.0	.0105	.716	1.407	1.3220	18.803
70.865	1007.2	297.4	24.2	75.6	13.4	.0072	.487	.959	2.113	.9025
70.865	1007.2	298.	24.8	76.6	13.4	.0072	.486	.959	2.109	.9043
70.865	1007.2	298.0	24.8	76.6	20.6	.0109	.735	1.447	3.190	1.3993
70.865	1007.2	297.9	24.7	76.5	24.8	.0130	.884	1.740	3.836	1.6972
70.865	1007.2	297.8	24.6	76.3	29.5	.0154	1.047	2.061	4.545	2.0349
70.865	1007.2	297.5	24.3	75.8	38.7	.0202	1.369	2.696	5.943	2.6942
70.865	1007.2	297.2	24.0	75.2	48.2	.0249	1.691	3.330	7.341	3.4032
70.865	1007.2	296.7	23.5	74.4	56.7	.0291	1.980	3.898	8.594	4.0256
70.865	1007.2	296.3	23.1	73.7	66.9	.0337	2.295	4.517	9.962	4.7465
70.586	1004.0	295.9	22.8	73.0	74.6	.0381	2.588	5.099	11.234	5.4286
70.586 *****	1004.0 *****	295.5 *****	22.3 ******	72.2 ******	84.2	.0429	2.915	5.737	12.652	6.2673
70.837	1007.2	296.5	23.4	74.0						
.050	.1	.9	.9	1.6	DEVIATIONS					

TABLE 67
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 10 PART 27N TEST DESCRIPTION

FLOW RATE VERSUS DIFFERENTIAL PRESSURE CHARACTERISTICS OF TEST SPECIMEN S/N 027 AT THE COMPLETION OF TEST 10 AND AFTER THE APPLICATION OF 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES TO THE REVERSE SIDE (HPOF SPECIMEN S/N SIDE DOWNSTREAM) OF THE SPECIMEN. DATA ACQUIRED IN THE FORWARD FLOW DIRECTION AT A TEST SPECIMEN INLET PRESSURE = 415 PSIA (NOMINAL).

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.49	50.4	74.7	.49	49.7	76.4	416.2	75.6	.0590
.41	50.4	74.6	.41	49.7	76.4	416.2	75.6	.0491
.30	50.2	75.0	.31	49.9	76.5	416.2	75.7	.0363
.26	50.1	75.2	.25	49.7	76.7	416.2	75.9	.0307
.21	50.4	75.2	.20	50.1	76.7	416.2	75.9	.0250
.14	50.2	75.6	.13	49.9	76.9	416.2	76.2	.0165
.14	50.4	75.2	.13	50.1	77.3	416.2	76.7	.0165
.22	50.1	76.1	.21	49.7	77.2	416.2	76.7	.0259
.26	49.1	75.1	.26	48.6	77.2	415.6	76.6	.0302
.31	50.1	75.8	.31	49.5	77.3	414.9	76.7	.0369
.36	49.9	75.9	.36	49.2	77.3	414.9	76.6	.0425
.40	49.9	75.9	.40	49.2	77.2	414.3	76.5	.0483
.45	49.7	75.9	.45	49.1	77.2	413.7	76.5	.0540
.50	50.1	75.9	.50	49.2	77.2	413.7	76.5	.0600

TABLE 67
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 10 PART 27N TEST DESCRIPTION

FLOW RATE VERSUS DIFFERENTIAL PRESSURE CHARACTERISTICS OF TEST SPECIMEN S/N 027 AT THE COMPLETION OF TEST 10 AND AFTER THE APPLICATION OF 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES TO THE REVERSE SIDE (HPOF SPECIMEN S/N SIDE DOWNSTREAM) OF THE SPECIMEN. DATA ACQUIRED IN THE FORWARD FLOW DIRECTION AT A TEST SPECIMEN INLET PRESSURE = 415 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSI_D)	GROSS DIFF. PRESS SECONDARY (PSI_D)	AVG GROSS DIFF. PRESS (PSI_D)	TARE DIFF. PRESS (PSI_D)	NET DIFF. PRESS (PSI_D)
416.2	75.6	.0590	250.417	250.417	250.417	.000	250.416
416.2	75.6	.0491	177.817	177.817	177.817	.000	177.817
416.2	75.7	.0363	114.371	114.371	114.371	.000	114.371
416.2	75.9	.0307	92.568	92.591	92.579	.000	92.579
416.2	75.9	.0250	71.224	71.442	71.333	.000	71.333
416.2	76.2	.0165	43.899	43.981	43.940	-0.000	43.940
416.2	76.7	.0165	43.957	43.981	43.969	-0.000	43.968
416.2	76.7	.0259	74.972	75.230	75.101	.000	75.101
415.6	76.6	.0312	91.820	91.960	91.890	.000	91.889
414.9	76.7	.0369	118.149	118.169	118.159	.000	118.158
414.9	76.6	.0425	144.989	144.989	144.989	.000	144.989
414.3	76.5	.0483	174.029	174.029	174.029	.000	174.029
413.7	76.5	.0540	212.854	212.854	212.854	.000	212.854
413.7	76.5	.0610	269.356	269.356	269.356	.000	269.356

TARE DIFF. PRESS = -3.40000E-05 + -4.44000E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0.(ACFM)**3

TABLE 67
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 10 PART 27N TEST DESCRIPTION

FLOW RATE VERSUS DIFFERENTIAL PRESSURE CHARACTERISTICS OF TEST SPECIMEN S/N 027 AT THE COMPLETION OF TEST 10 AND AFTER THE APPLICATION OF 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES TO THE REVERSE SIDE (HPOF SPECIMEN S/N SIDE DOWNSTREAM) OF THE SPECIMEN. DATA ACQUIRED IN THE FORWARD FLOW DIRECTION AT A TEST SPECIMEN INLET PRESSURE = 415 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/ MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.265	416.2	297.4	24.2	75.6	46.8	.059	1.653	3.254	7.174	17.6060	250.416
29.265	416.2	297.4	24.2	75.6	39.0	.0491	1.376	2.710	5.974	12.5018	177.817
29.265	416.2	297.5	24.3	75.7	28.8	.0363	1.016	2.000	4.408	8.0411	114.371
29.265	416.2	297.6	24.4	75.9	24.4	.0307	.861	1.695	3.737	6.5089	92.579
29.265	416.2	297.6	24.4	75.9	19.8	.0250	.701	1.380	3.043	5.0152	71.333
29.265	416.2	297.7	24.6	76.2	13.1	.0165	.462	.910	2.006	3.0893	43.940
29.265	416.2	298.0	24.8	76.7	13.0	.0165	.460	.907	1.999	3.0913	43.968
29.265	416.2	298.1	24.9	76.7	20.5	.0259	.723	1.424	3.140	5.2801	75.101
29.219	415.6	297.9	24.8	76.6	23.9	.0302	.844	1.664	3.666	6.4605	91.889
29.174	414.9	298.0	24.8	76.7	29.1	.0369	1.028	2.024	4.462	8.3074	118.158
29.174	414.9	297.9	24.8	76.6	33.6	.0425	1.186	2.334	5.146	10.1937	144.989
29.128	414.3	297.9	24.7	76.5	38.1	.0483	1.344	2.646	5.834	12.2354	174.029
29.083	413.7	297.9	24.7	76.5	42.5	.0540	1.500	2.954	6.512	14.9651	212.854
29.083	413.7	297.9	24.7	76.5	47.3	.0600	1.669	3.286	7.244	18.9376	269.356
*****	*****	*****	******	******							
29.213	415.5	297.8	24.6	76.3							
.060	.9	.2	.2	.4	DEVIATIONS						

TABLE 68
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 10 PART 27M TEST DESCRIPTION

FLOW RATE VERSUS DIFFERENTIAL PRESSURE CHARACTERISTICS OF TEST SPECIMEN S/N 027 AT THE COMPLETION OF TEST 10 AND AFTER THE APPLICATION OF 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES TO THE REVERSE SIDE (HPOF SPECIMEN S/N SIDE DOWNSTREAM) OF THE SPECIMEN. DATA ACQUIRED IN THE FORWARD FLOW DIRECTION AT A TEST SPECIMEN INLET PRESSURE = 1000 PSIA (NOMINAL).

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.85	50.4	66.4	.91	48.4	73.1	1017.2	70.7	.0427
.76	49.5	67.7	.81	48.2	72.2	1 17.2	69.7	.0377
.67	50.1	66.2	.73	48.6	71.6	1 17.2	68.9	.0332
.58	50.1	65.9	.61	48.8	71.3	1 17.2	68.6	.0288
.49	50.2	66.8	.56	49.2	71.2	1 17.2	68.5	.0243
.40	50.4	66.1	.40	49.9	71.2	1 17.2	68.6	.0196
.30	49.9	66.4	.30	49.3	71.5	1017.2	69.0	.0148
.26	50.4	66.6	.25	49.9	71.8	1017.2	69.3	.0126
.21	50.2	67.2	.20	49.9	72.1	1017.2	69.6	.0102
.14	49.9	68.1	.14	49.5	72.4	1017.2	70.2	.0068
.14	50.0	68.2	.13	50.3	72.8	1 17.2	71.0	.0069
.21	50.1	68.2	.20	49.7	73.1	1 17.2	71.1	.0102
.26	50.4	68.0	.25	50.1	72.8	1017.2	70.9	.0125
.31	50.4	68.7	.31	49.9	72.7	1 17.2	70.7	.0152
.41	50.2	68.1	.41	49.5	72.3	1 17.2	70.2	.0200
.49	50.2	67.2	.50	49.3	71.8	1 17.2	69.5	.0243
.58	50.2	66.1	.60	49.1	71.3	1 17.2	68.7	.0289
.67	50.2	65.3	.70	48.8	71.7	1 13.2	68.0	.0335
.75	50.1	64.4	.81	48.4	69.8	1 13.2	67.1	.0379
.84	49.9	63.9	.91	47.6	68.7	1013.2	66.3	.0419

TABLE 68
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 1' PART 27" TEST DESCRIPTIO

FLOW RATE VERSUS DIFFERENTIAL PRESSURE CHARACTERISTICS OF TEST SPECIMEN S/N 027 AT THE COMPLETION OF TEST 10 AND AFTER THE APPLICATION OF 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES TO THE REVERSE SIDE (HPOF SPECIMEN S/N SIDE DOWNSTREAM) OF THE SPECIMEN. DATA ACQUIRED IN THE ORWARD FLOW DIRECTION AT A TEST SPECIMEN INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1017.2	70.7	.0427	148.251	148.251	148.251	-0.000	148.251
1017.2	69.7	.0377	127.734	127.734	127.734	-0.000	127.734
1017.2	68.9	.0332	108.795	108.795	108.795	-0.000	108.795
1017.2	68.6	.0295	90.99	91.434	91.212	-0.000	91.212
1017.2	68.5	.0243	73.641	74.073	73.857	-0.000	73.857
1017.2	68.6	.0196	57.134	57.659	57.396	-0.000	57.397
1017.2	69.0	.0148	41.871	41.876	41.874	-0.000	41.874
1017.2	69.3	.0126	34.745	34.846	34.796	-0.000	34.796
1017.2	69.0	.0102	27.329	27.375	27.352	-0.000	27.352
1017.2	70.2	.0068	17.537	17.517	17.527	-0.000	17.527
1017.2	71.0	.0069	17.826	17.975	17.900	-0.000	17.901
1017.2	71.1	.0102	27.212	27.375	27.294	-0.000	27.294
1017.2	70.9	.0125	34.745	34.961	34.853	-0.000	34.853
1017.2	70.7	.0162	43.262	43.139	43.200	-0.000	43.201
1017.2	70.2	.0220	58.886	59.237	59.062	-0.000	59.062
1017.2	69.5	.0243	74.14.	74.389	74.265	-0.000	74.265
1017.2	68.7	.0289	92.065	92.065	92.065	-0.000	92.065
1013.2	68..	.0336	109.426	109.426	109.426	-0.000	109.426
1013.2	67.1	.0379	128.996	128.996	128.996	-0.000	128.997
1013.2	66.3	.0419	148.567	148.567	148.567	-0.000	148.567

TARE DIFF. PRESS = -1.64000E-04 + -1.2693JE-02 (ACFM) + 2.4807JE-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 68
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 1[illegible] PART 27M TEST DESCRIPTION

FLOW RATE VERSUS DIFFERENTIAL PRESSURE CHARACTERISTICS OF TEST SPECIMEN S/N 027 AT THE COMPLETION OF TEST 10 AND AFTER THE APPLICATION OF 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES TO THE REVERSE SIDE (HPOF SPECIMEN S/N SIDE DOWNSTREAM) OF THE SPECIMEN. DATA ACQUIRED IN THE FORWARD FLOW DIRECTION AT A TEST SPECIMEN INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS									NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE					
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	CFM	SCFM	GN_2 KG/HR	GN_2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
71.514	1017.2	294.6	21.5	70.7	83.6	.427	2.953	5.015	12.821	10.4231	148.251
71.514	1017.2	294.1	20.9	69.7	71.9	.377	2.609	5.135	11.328	8.9806	127.734
71.514	1017.2	293.7	20.5	68.9	66.1	.332	2.301	4.530	9.988	7.6490	108.795
71.514	1017.2	293.5	20.3	68.6	56.6	.288	1.999	3.931	8.679	6.4128	91.212
71.514	1017.2	293.4	20.3	68.5	47.7	.243	1.663	3.314	7.306	5.1927	73.857
71.514	1017.2	293.5	20.3	68.6	38.8	.196	1.362	2.682	5.914	4.0354	57.397
71.514	1017.2	293.7	20.5	69.1	29.1	.148	1.027	2.029	4.460	2.9440	41.874
71.514	1017.2	293.9	20.7	69.3	24.7	.126	.874	1.726	3.793	2.4464	34.796
71.514	1017.2	294.0	20.9	69.6	20.0	.0102	.707	1.396	3.068	1.9230	27.352
71.514	1017.2	294.4	21.2	70.2	13.4	.068	.472	.930	2.051	1.2323	17.527
71.514	1017.2	294.8	21.7	71.0	13.5	.0069	.476	.937	2.066	1.2585	17.901
71.514	1017.2	294.9	21.7	71.1	19.9	.0102	.702	1.382	3.048	1.9189	27.294
71.514	1017.2	294.6	21.6	70.9	24.5	.125	.867	1.707	3.763	2.4504	34.853
71.514	1017.2	294.7	21.5	70.7	29.3	.0150	1.053	2.074	4.572	3.0373	43.201
71.514	1017.2	294.4	21.2	70.2	39.2	.0200	1.385	2.728	6.013	4.1525	59.062
71.514	1017.2	294.0	20.8	69.5	47.6	.0243	1.680	3.309	7.293	5.2213	74.265
71.514	1017.2	293.5	20.4	68.7	56.7	.0289	2.003	3.945	8.697	6.4728	92.065
71.235	1013.2	293.2	20.1	68.1	66.7	.338	2.319	4.567	10.068	7.6934	109.426
71.235	1013.2	292.7	19.5	67.1	74.5	.0379	2.629	5.178	11.415	9.0694	128.997
71.235	1013.2	292.2	19.1	66.3	82.4	.0419	2.909	5.728	12.628	10.4453	148.567
*****	*****	*****	******	******							
71.472	1016.0	293.9	20.7	69.3							
.071	1.0	.5	.5	1.0	DEVIATIONS						

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TABLE-69
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 10 PART 27LR TEST DESCRIPTION: FLOW RATE VERSUS DIFFERENTIAL PRESSURE CHARACTERISTICS OF TEST SPECIMEN S/N 027 AT THE COMPLETION OF TEST 10 AND AFTER THE APPLICATION OF 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES TO THE REVERSE SIDE (HPOF SPECIMEN S/N SIDE DOWNSTREAM) OF THE SPECIMEN. DATA ACQUIRED IN THE REVERSE FLOW DIRECTION AT A TEST SPECIMEN INLET PRESSURE 415 PSIA (NOMINAL).

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS			
FLOWMETER ONE			FLOWMETER TWO						
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	
.49	50.2	79.5	.50	49.3	80.9	414.3	80.2	.0597	
.40	50.2	79.7	.40	49.3	81.0	414.3	80.4	.0478	
.31	50.4	80.0	.31	49.9	81.2	414.3	80.6	.0372	
.26	50.4	80.2	.25	49.9	81.4	413.7	80.8	.0311	
.21	50.8	80.4	.20	50.3	81.5	413.7	81.0	.0252	
.13	50.6	80.7	.13	50.1	81.8	413.7	81.2	.0160	
.13	50.6	81.1	.13	50.3	82.2	413.7	81.6	.0159	
.22	49.9	81.1	.21	49.3	82.2	413.7	81.7	.0257	
.26	50.2	81.1	.25	49.7	82.2	413.7	81.6	.0308	
.31	50.2	81.1	.31	49.7	82.2	413.7	81.7	.0373	
.40	50.1	81.2	.40	49.2	82.3	413.7	81.8	.0480	
.46	49.9	81.4	.46	49.8	82.3	413.7	81.9	.0547	

TABLE 69
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 10 PART 27LR TEST DESCRIPTION: FLOW RATE VERSUS DIFFERENTIAL PRESSURE CHARACTERISTICS OF TEST SPECIMEN S/N 027 AT THE COMPLETION OF TEST 10 AND AFTER THE APPLICATION OF 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES TO THE REVERSE SIDE (HPOF SPECIMEN S/N SIDE DOWNSTREAM) OF THE SPECIMEN. DATA ACQUIRED IN THE REVERSE FLOW DIRECTION AT A TEST SPECIMEN INLET PRESSURE = 415 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS
****

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
414.3	80.2	.0597	297.133	297.133	297.133	.000	297.133
414.3	80.4	.0478	188.234	188.234	188.234	.000	188.233
414.3	80.6	.0372	127.628	127.628	127.628	.000	127.628
413.7	80.8	.0311	100.167	100.167	100.167	.000	100.166
413.7	81.0	.0252	76.221	76.177	76.199	.000	76.199
413.7	81.2	.0160	44.768	44.612	44.690	-0.000	44.690
413.7	81.6	.0159	44.710	44.612	44.661	-0.000	44.661
413.7	81.7	.0257	78.344	78.387	78.365	.000	78.365
413.7	81.6	.0308	99.220	99.220	99.220	.000	99.219
413.7	81.7	.0373	129.522	129.522	129.522	.000	129.522
413.7	81.8	.0480	189.496	189.496	189.496	.000	189.496
413.7	81.9	.0547	241.894	241.894	241.894	.000	241.894

TARE DIFF. PRESS = -3.49000E-05 + -4.44000E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 69
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 10 PART 27LR TEST DESCRIPTION: FLOW RATE VERSUS DIFFERENTIAL PRESSURE CHARACTERISTICS OF TEST SPECIMEN S/N 027 AT THE COMPLETION OF TEST 10 AND AFTER THE APPLICATION OF 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN2 IMPACT CYCLES TO THE REVERSE SIDE (HPOF SPECIMEN S/N SIDE DOWNSTREAM) OF THE SPECIMEN. DATA ACQUIRED IN THE REVERSE FLOW DIRECTION AT A TEST SPECIMEN INLET PRESSURE = 415 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS									NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE					
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.128	414.3	299.9	26.8	80.2	46.7	.0597	1.650	3.248	7.161	20.8905	297.133
29.128	414.3	300.0	26.9	80.4	37.4	.0478	1.322	2.604	5.740	13.2341	188.233
29.128	414.3	300.1	27.0	80.6	29.1	.0372	1.028	2.025	4.463	8.9731	127.628
29.083	413.7	300.3	27.1	80.8	24.3	.0311	.858	1.689	3.724	7.0424	100.166
29.083	413.7	300.4	27.2	81.0	19.7	.0252	.696	1.370	3.019	5.3573	76.199
29.083	413.7	300.5	27.4	81.2	12.5	.0160	.440	.867	1.911	3.1420	44.690
29.083	413.7	300.7	27.6	81.6	12.4	.0159	.439	.864	1.904	3.1400	44.661
29.083	413.7	300.8	27.6	81.7	20.0	.0257	.707	1.392	3.068	5.5096	78.365
29.083	413.7	300.7	27.6	81.6	24.0	.0308	.848	1.669	3.680	6.9758	99.219
29.083	413.7	300.8	27.6	81.7	29.1	.0373	1.028	2.024	4.462	9.1063	129.522
29.083	413.7	300.8	27.6	81.8	37.4	.0480	1.322	2.604	5.740	13.3229	189.496
29.083	413.7	300.9	27.7	81.9	42.6	.0547	1.505	2.964	6.534	17.0068	241.894
*****	*****	*****	******	******							
29.094	413.8	300.5	27.3	81.2							
.017	.2	.3	.3	.5	DEVIATIONS						

TABLE 70
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST [illegible] PART 27KR TEST DESCRIPTION

FLOW RATE VERSUS DIFFERENTIAL PRESSURE CHARACTERISTICS OF TEST SPECIMEN S/N 027 AT THE COMPLETION OF TEST 10 AND AFTER THE APPLICATION OF 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES TO THE REVERSE SIDE (HPOF SPECIMEN S/N SIDE DOWNSTREAM) OF THE SPECIMEN. DATA ACQUIRED IN THE REVERSE FLOW DIRECTION AT A TEST SPECIMEN INLET PRESSURE = 1000 PSIA (NOMINAL).

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.78	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1 09.2	78.6	.0388
.69	[illegible]	[illegible]	.70	48.7	[illegible]	1 09.2	78.0	.0341
.60	[illegible]	74.6	.60	49.1	79.9	1 09.2	77.8	.0296
.51	[illegible]	[illegible]	.51	49.3	[illegible]	1 09.2	77.7	.0250
.41	[illegible]	[illegible]	.40	49.3	[illegible]	1 05.3	77.9	.0200
.31	[illegible]	[illegible]	.30	[illegible]	[illegible]	1 05.3	78.3	.0153
.27	[illegible]	[illegible]	.25	[illegible]	[illegible]	1 05.3	78.4	.0131
.21	[illegible]	[illegible]	.20	[illegible]	[illegible]	1 05.3	78.6	.0104
.14	[illegible]	77.4	.13	[illegible]	[illegible]	1 05.3	79.0	.0070
.14	[illegible]	[illegible]	.13	[illegible]	[illegible]	1 05.3	79.4	.0070
.22	[illegible]	[illegible]	.21	[illegible]	[illegible]	1 05.3	79.3	.0107
.26	[illegible]	77.7	.25	[illegible]	[illegible]	1 05.3	79.2	.0128
.32	49.9	77.3	.31	49.5	[illegible]	1 05.3	79.0	.0154
.41	[illegible]	[illegible]	.41	49.9	[illegible]	1 05.3	78.6	.0204
.51	[illegible]	78.1	.51	49.5	[illegible]	1 05.3	78.1	.0251
.59	[illegible]	[illegible]	.60	49.5	79.4	1 05.3	77.3	.0295
.68	[illegible]	[illegible]	.70	48.9	[illegible]	1 01.3	76.4	.0342
.75	[illegible]	[illegible]	.71	48.5	[illegible]	1 01.3	75.7	.0384
.84	[illegible]	[illegible]	.81	48.6	77.3	1 01.3	74.9	.0432

TABLE 70
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST SPECIMEN S/N 027 AT THE COMPLETION OF TEST 10 AND AFTER THE APPLICATION OF 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES TO THE REVERSE SIDE (HPOF SPECIMEN S/N SIDE DOWNSTREAM) OF THE SPECIMEN. DATA ACQUIRED IN THE REVERSE FLOW DIRECTION AT A TEST SPECIMEN INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST 004 EO 10 PART 27K5 TEST DESCRIPTION

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	VS FLOW RATE (SCFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1009.2	78.6	.388	138.678	138.678	138.678	-0.000	138.677
1009.2	78.3	.341	117.528	117.528	117.528	-0.000	117.528
1009.2	77.8	.285	98.273	98.273	98.273	-0.000	98.273
1009.2	77.7	.230	79.469	79.965	79.717	-0.000	79.717
1005.3	77.9	.202	60.686	61.026	60.686	-0.000	60.686
1005.3	78.3	.153	44.342	44.326	44.334	-0.000	44.340
1005.3	78.4	.131	37.162	37.128	37.125	-0.000	37.125
1005.3	78.6	.101.4	28.564	28.599	28.582	-0.000	28.582
1005.3	79.0	.0070	18.251	18.280	18.265	-0.000	18.266
1005.3	79.4	.0071	18.251	18.452	18.351	-0.000	18.352
1005.3	79.3	.011.7	29.378	29.518	29.447	-0.000	29.447
1005.3	79.2	.0128	36.444	36.651	36.547	-0.000	36.547
1005.3	79.0	.0154	44.913	44.920	44.916	-0.000	44.916
1005.3	78.6	.0224	62.397	62.326	62.361	-0.000	62.351
1005.3	78.1	.251	80.216	80.912	80.565	-0.000	80.565
1005.3	77.3	.295	98.273	98.273	98.273	-0.000	98.273
1001.3	76.4	.0342	119.106	119.106	119.106	-0.000	119.106
1001.3	75.7	.0384	140.255	140.255	140.255	-0.000	140.255
1001.3	74.9	.0432	164.244	164.244	164.244	-0.000	164.244

TARE DIFF. PRESS = -1.640000E-04 + -1.2693.E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 70
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST DESCRIPTION: FLOW RATE VERSUS DIFFERENTIAL PRESSURE CHARACTERISTICS OF TEST SPECIMEN S/N 027 AT THE COMPLETION OF TEST 10 AND AFTER THE APPLICATION OF 10 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES TO THE REVERSE SIDE (HPOF SPECIMEN S/N SIDE DOWNSTREAM) OF THE SPECIMEN. DATA ACQUIRED IN THE REVERSE FLOW DIRECTION AT A TEST SPECIMEN INLET PRESSURE = 1000 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	CF	SCFM	GN_2 KG/HR	GN_2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
70.956	1007.2	299.1	26.0	78.8	74.2	.096	2.624	5.159	11.374	9.7499	138.677
70.956	1007.2	298.7	25.6	78.1	64.3	.084	2.267	4.542	10.014	8.2630	117.528
70.956	1007.2	298.8	25.6	77.8	50.7	.069	1.942	3.943	8.692	6.9093	98.273
70.956	1007.2	298.5	25.4	77.7	47.9	.060	1.691	3.329	7.340	5.6047	79.717
70.677	1005.3	298.7	25.6	77.9	38.2	.049	1.359	2.659	5.862	4.2667	60.686
70.677	1005.3	298.9	25.7	78.3	29.1	.036	1.028	2.024	4.463	3.1174	44.340
70.677	1005.3	298.9	25.8	78.4	24.9	.031	.881	1.734	3.823	2.6101	37.125
70.677	1005.3	299.0	25.9	78.6	19.9	.025	.711	1.381	3.044	2.0095	28.582
70.677	1005.3	299.3	26.1	79.	13.2	.017	.468	.921	2.030	1.2842	18.266
70.677	1005.3	299.5	26.3	79.4	13.2	.017	.467	.920	2.028	1.2902	18.352
70.677	1005.3	299.5	26.3	79.3	20.3	.025	.716	1.410	3.107	2.0703	29.447
70.677	1005.3	299.4	26.2	79.2	24.4	.030	.861	1.696	3.740	2.5695	36.547
70.677	1005.3	299.2	26.1	79.	29.3	.037	1.035	2.038	4.492	3.1579	44.916
70.677	1005.3	299.7	26.5	79.6	39.0	.049	1.376	2.709	5.973	4.3837	62.351
70.677	1005.3	298.9	25.8	78.1	47.9	.059	1.693	3.333	7.349	5.6643	80.565
70.677	1005.3	298.3	25.2	77.3	56.4	.070	1.991	3.919	8.640	6.9093	98.273
70.398	1001.3	297.9	24.7	76.4	65.2	.083	2.341	4.611	9.990	8.3740	119.106
70.398	1001.3	297.4	24.3	75.7	73.3	.092	2.589	5.098	11.239	9.8609	140.255
70.398	1001.3	297.0	23.8	74.9	82.5	.103	2.914	5.738	12.651	11.5475	164.244
*****	*****	*****	******	******							
70.691	1005.3	298.7	25.6	78.0							
.111	1.9	.5	.5	.9	DEVIATIONS						

TABLE 71

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA IN THE FORWARD DIRECTION (S/N SIDE UPSTREAM). ACQUIRED ON TEST SPECIMEN S/N 028 AFTER COMPLETION OF NORMAL TEST 12 SEQUENCE TEST SPECIMEN INLET PRESSURE = 415 PSIA.

TEST NUMBER 12 PART 2RU TEST DESCRIPTION

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.40	50.4	74.9	.40	49.9	75.4	414.3	75.7	.0485
.36	50.6	75.1	.35	49.9	76.5	414.3	75.8	.0431
.30	50.6	74.1	.30	50.1	76.5	413.7	75.8	.0368
.26	50.2	77.2	.25	49.9	76.7	413.7	75.9	.0308
.21	50.4	75.5	.20	49.9	76.7	413.7	76.1	.0248
.14	50.1	75.7	.13	49.9	76.9	413.7	76.3	.0168
.14	50.1	75.9	.13	49.7	77.1	413.7	76.5	.0167
.21	50.1	75.8	.21	49.7	77.2	413.6	76.5	.0254
.26	49.9	76.0	.25	49.3	77.1	413.6	76.5	.0305
.31	49.9	76.2	.31	49.3	77.1	413.6	76.4	.0368
.36	49.9	76.2	.36	49.2	77.1	412.4	76.4	.0428
.40	50.1	76.0	.40	49.3	77.3	411.7	76.5	.0485

TABLE 71

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA IN THE FORWARD DIRECTION (S/N SIDE UPSTREAM). ACQUIRED ON TEST SPECIMEN S/N 028 AFTER COMPLETION OF NORMAL TEST 12 SEQUENCE TEST SPECIMEN INLET PRESSURE = 415 PSIA.

TEST NUMBER 12 PART 260 TEST DESCRIPTION

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
414.3	75.7	.495	274.223	274.223	274.223	.000	274.222
414.3	75.8	.431	185.73[illegible]	185.73[illegible]	185.73[illegible]	.000	185.729
413.[illegible]	75.[illegible]	.[illegible]	130.738	130.738	130.738	.000	130.737
413.7	75.9	.[illegible]	96.289	96.289	96.289	.000	96.288
413.7	76.1	.[illegible]	67.846	67.846	67.846	.000	67.576
413.7	76.3	.[illegible]	39.143	39.[illegible]	39.287	.000	39.287
413.7	76.5	.157	39.[illegible]	39.135	39.056	.000	39.055
413.8	76.5	.0254	70.561	71.[illegible]	70.783	.000	70.783
413.8	76.5	.[illegible]	95.[illegible]	95.[illegible]	95.[illegible]	.000	95.024
413.8	76.4	.[illegible]	132.95[illegible]	132.[illegible]	132.95[illegible]	.000	132.950
412.4	76.4	.421	182.[illegible]	182.[illegible]	182.[illegible]	.000	182.885
411.7	76.5	.0485	279.595	279.595	279.595	.000	279.595

TARE DIFF. PRESS = -3.46000E-05 + -4.44000E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 71

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA IN THE FORWARD DIRECTION (S/N SIDE UPSTREAM). ACQUIRED ON TEST SPECIMEN S/N 028 AFTER COMPLETION OF NORMAL TEST 12 SEQUENCE TEST SPECIMEN INLET PRESSURE = 415 PSIA.

TEST NUMBER 12 PART 2511 TEST DESCRIPTION

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/ MIN	CFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.128	414.3	297.4	24.3	75.7	38.3	.0495	1.353	2.664	5.873	19.2798	274.222
29.128	414.3	297.5	24.3	75.8	34.1	.0431	1.203	2.368	5.221	13.0581	185.729
29.083	413.7	297.5	24.3	75.8	29.9	.0386	1.024	2.016	4.446	9.1918	130.737
29.083	413.7	297.6	24.4	75.9	24.3	.0309	.858	1.690	3.726	6.7697	96.288
29.083	413.7	297.7	24.5	76.1	19.6	.0244	.691	1.360	2.999	4.7510	67.576
29.083	413.7	297.8	24.6	76.3	13.2	.0168	.467	.919	2.026	2.7621	39.287
29.083	413.7	297.9	24.7	76.5	13.1	.0167	.463	.912	2.010	2.7459	39.055
29.037	413.0	297.9	24.7	76.5	20.0	.0254	.706	1.391	3.066	4.9765	70.783
29.037	413.0	297.9	24.7	76.5	24.0	.0304	.847	1.667	3.675	6.6809	95.024
29.037	413.0	297.9	24.7	76.4	28.9	.0368	1.022	2.011	4.434	9.3473	132.950
28.992	412.4	297.9	24.7	76.4	33.6	.0428	1.186	2.335	5.148	12.8581	182.885
28.946	411.7	297.9	24.7	76.5	38.0	.0485	1.341	2.640	5.820	19.6575	279.595
*****	*****	*****	******	******							
29.060	413.3	297.7	24.6	76.2							
.042	.5	.2	.2	.3	DEVIATIONS						

TABLE 72

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA IN THE FORWARD DIRECTION (S/N SIDE UPSTREAM). DATA ACQUIRED ON TEST SPECIMEN S/N 028 AFTER COMPLETION OF NORMAL TEST 12 SEQUENCE
TEST SPECIMEN INLET PRESSURE = 1000 PSIA.

TEST NUMBER 12 PART 2NT TEST DESCRIPTION

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.87	50.3	67.3	.91	48.4	72.7	1005.3	70.5	.0435
.78	50.1	67.4	.81	48.4	72.	1005.3	69.7	.0391
.69	50.5	67.1	.71	49.0	71.9	1005.3	69.3	.0346
.60	50.1	66.1	.60	48.8	71.7	1005.3	68.8	.0296
.51	50.5	66.4	.50	49.3	72.2	1005.3	69.5	.0251
.41	50.1	66.8	.40	49.3	72.3	1005.3	69.6	.0202
.32	49.9	67.3	.31	49.3	71.4	1005.3	69.3	.0154
.26	50.1	67.8	.25	49.7	71.9	1005.3	69.8	.0128
.21	50.3	68.4	.20	49.9	72.4	1005.3	70.4	.0104
.14	49.7	69.3	.13	49.5	72.8	1005.3	71.1	.0069
.14	49.9	71.8	.13	49.7	73.8	1005.3	72.3	.0069
.22	50.3	71.8	.21	49.9	73.8	1005.3	72.3	.0108
.26	50.5	71.9	.25	50.1	74.0	1005.3	72.4	.0129

TABLE 72

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA IN THE FORWARD DIRECTION (S/N SIDE UPSTREAM). DATA ACQUIRED ON TEST SPECIMEN S/N 028 AFTER COMPLETION OF NORMAL TEST 12 SEQUENCE TEST SPECIMEN INLET PRESSURE.= 1000 PSIA.

TEST NUMBER 12 PART 28T TEST DESCRIPTION

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1005.3	70.5	.0435	225.973	225.973	225.973	-0.000	225.973
1005.3	69.7	.0391	185.835	185.835	185.835	-0.000	185.835
1005.3	69.3	.0346	151.070	151.070	151.070	-0.000	151.070
1005.3	68.8	.0298	117.885	117.885	117.885	-0.000	117.885
1005.3	69.5	.0251	90.810	90.810	90.810	-0.000	90.810
1005.3	69.6	.0202	64.786	64.789	64.786	-0.000	64.787
1005.3	69.3	.0154	44.264	43.930	44.097	-0.000	44.097
1005.3	69.8	.0128	33.995	34.084	34.040	-0.000	34.040
1005.3	70.4	.0104	25.584	25.628	25.606	-0.000	25.606
1005.3	71.1	.0089	14.909	14.905	14.907	-0.000	14.907
1005.3	72.3	.0064	14.909	15.019	14.964	-0.000	14.964
1005.3	72.3	.0104	26.918	27.007	26.962	-0.000	26.963
1005.3	72.4	.0129	34.401	34.545	34.473	-0.000	34.473

TARE DIFF. PRESS = -1.64006E-04 + -1.26936E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 72

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

FLOW RATE VERSUS DIFFERENTIAL PRESSURE DATA IN THE FORWARD DIRECTION (S/N SIDE UPSTREAM). DATA ACQUIRED ON TEST SPECIMEN S/N 028 AFTER COMPLETION OF NORMAL TEST 12 SEQUENCE TEST SPECIMEN INLET PRESSURE = 1000 PSIA.

TEST NUMBER 12 PART 2&T TEST DESCRIPTION

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	CFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
70.677	1005.3	294.5	21.4	70.5	84.1	.435	2.971	5.849	12.895	15.8875	225.973
70.677	1005.3	294.1	20.9	69.7	76.8	.391	2.676	5.269	11.615	13.0655	185.835
70.677	1005.3	293.9	20.7	69.3	67.0	.0346	2.367	4.661	10.276	10.6213	151.070
70.677	1005.3	293.6	20.5	68.8	57.5	.0296	2.031	3.998	8.815	8.2882	117.885
70.677	1005.3	294.0	20.8	69.5	48.6	.0251	1.716	3.380	7.451	6.3846	90.810
70.677	1005.3	294.0	20.9	69.6	39.1	.0202	1.379	2.716	5.987	4.5549	64.787
70.677	1005.3	293.9	20.7	69.3	29.8	.0154	1.053	2.073	4.571	3.1003	44.097
70.677	1005.3	294.2	21.0	69.8	24.7	.0128	.874	1.721	3.794	2.3932	34.040
70.677	1005.3	294.5	21.3	70.4	20.2	.0104	.712	1.401	3.090	1.8003	25.606
70.677	1005.3	294.9	21.7	71.1	13.3	.0069	.468	.921	2.032	1.0481	14.907
70.677	1005.3	295.0	22.4	72.3	13.3	.0069	.469	.923	2.035	1.0521	14.964
70.677	1005.3	295.6	22.4	72.3	20.9	.0108	.738	1.453	3.204	1.8957	26.963
70.677	1005.3	295.6	22.5	72.4	24.8	.0129	.876	1.729	3.804	2.4237	34.473
*****	*****	*****	******	******							
70.677	1005.3	294.5	21.3	70.4							
0	.0	.6	.6	1.0	DEVIATIONS						

TABLE 73

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

FLOW RATE VERSUS DIFFERENTIAL PRESSURE CHARACTERISTICS OF TEST SPECIMEN S/N 025 AFTER 100 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES AND CONTAMINATED WITH 46 MG OF Fe_2O_3. FLOW DATA ACQUIRED AT AN INLET PRESSURE OF 1,000 PSIA NOMINAL AND IN THE FORWARD (S/N SIDE UPSTREAM) DIRECTION

TEST NUMBER 8 PART 252 TEST DESCRIPTION

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSI_A)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSI_A)	TEMP (DEG. F)	PRESSURE (PSI_A)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.27	50.6	79.7	.26	50.2	81.5	1009.2	80.6	.0132
.22	50.6	79.7	.21	50.2	81.6	1009.2	80.6	.0106
.16	50.8	79.9	.15	50.4	81.7	1009.2	80.8	.0079
.11	49.5	81.3	.10	49.3	81.8	1009.2	81.0	.0052
.11	49.5	80.6	.10	49.3	82.1	1009.2	81.4	.0052
.17	49.7	81.5	.16	49.5	82.2	1009.2	81.3	.0079
.21	49.7	81.3	.20	49.5	82.1	1009.2	81.2	.0101
.25	49.5	79.9	.24	49.3	82.0	1009.2	80.9	.0120

TABLE 73

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

FLOW RATE VERSUS DIFFERENTIAL PRESSURE CHARACTERISTICS OF TEST SPECIMEN S/N 025 AFTER 100 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES AND CONTAMINATED WITH 46 MG OF Fe_2O_3. FLOW DATA ACQUIRED AT AN INLET PRESSURE OF 1,000 PSIA NOMINAL AND IN THE FORWARD (S/N SIDE UPSTREAM) DIRECTIO .

TEST NUMBER 8 PART 252 TEST DESCRIPTION

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1009.2	70.6	.0132	264.516	264.516	264.516	-0.000	264.516
1009.2	80.6	.0106	196.967	196.967	196.967	-0.000	196.967
1009.2	81.8	.0089	136.046	136.046	136.046	-0.000	136.046
1009.2	81.6	.0062	83.329	83.329	83.178	-0.000	83.179
1009.2	81.4	.0052	82.409	83.016	82.708	-0.000	82.709
1009.2	81.3	.0079	136.046	136.046	136.046	-0.000	136.046
1009.2	81.2	.0101	184.025	184.025	184.025	-0.000	184.025
1009.2	80.9	.0126	232.951	232.951	232.951	-0.000	232.951

TARE DIFF. PRESS = -1.640306E-04 + -1.269306E-02 (ACFM) + 2.480706E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 73

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

FLOW RATE VERSUS DIFFERENTIAL PRESSURE CHARACTERISTICS OF TEST SPECIMEN S/N 025 AFTER 100 HIGH PRESSURE (10,000 PSIA NOMINAL) GN_2 IMPACT CYCLES AND CONTAMINATED WITH 46 MG OF Fe_2O_3. FLOW DATA ACQUIRED AT AN INLET PRESSURE OF 1,000 PSIA NOMINAL.AND IN THE FORWARD (S/N SIDE UPSTREAM) DIRECTION.

TEST NUMBER 8 PART 252 TEST DESCRIPTION

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	CFM	SCFM	GN_2 KG/HR	GN_2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
70.956	1009.2	300.2	27.0	80.6	25.2	.132	.891	1.754	3.868	18.5973	264.516
70.956	1009.2	300.2	27.0	80.6	20.1	.0710	.711	1.401	3.088	13.8481	196.967
70.956	1009.2	300.3	27.1	80.8	15.1	.0540	.532	1.048	2.311	9.5650	136.046
70.956	1009.2	300.4	27.2	81.0	10.0	.0352	.352	.693	1.527	5.8481	83.179
70.956	1009.2	300.6	27.4	81.4	9.9	.0352	.349	.687	1.514	5.8150	82.709
70.956	1009.2	300.6	27.4	81.3	15.1	.0540	.532	1.048	2.311	9.5650	136.046
70.956	1009.2	300.5	27.3	81.2	19.1	.0101	.676	1.331	2.935	12.9383	184.025
70.956	1009.2	300.3	27.2	80.9	22.8	.0120	.805	1.585	3.495	16.3781	232.951
*****	*****	*****	******	******							
70.956	1009.2	300.4	27.2	81.0							
0	0	.1	.1	.2	DEVIATIONS						

TABLE 74

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 4/29/76

TEST NUMBER 5 PART A TEST DESCRIPTION Clean Condition - Flow Rate versus Differential Pressure (Test Specimen [S/N 6] Inlet Pressure 415 psia (nominal)

FLOWMETER ONE			FLOWMETER TWO			TEST SPECIMEN INLET CONDITIONS		
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
0	4..2	..5	.13	47.6	..4	413.0	..5	.0149
0	..4	82.8	.21	49.9	82.	413..	82.4	.0254
0	..9	81.6	.25	49.4	82.5	411.7	82.1	.0303
0	..4	80.7	.31	49.7	82.8	424.7	81.7	.0362
0	49.5	79.6	.40	47.6	82.8	424..	81.2	.0450
0	49.5	78..	.49	48..	82.5	422.7	80.4	.0564
0	49.5	77.5	.60	48.0	82.1	422.1	79.8	.0682
0	47..	76.3	.70	45.5	81.3	42..8	78.8	.0796
0	44..	75.9	.80	44.4	80.9	4..0.1	78.4	.0846
0	45.7	75.2	.91	43.3	80.2	418.8	77.7	.0942
0	45.3	74.8	1.1	42.7	79.6	417.5	77.2	.1035
0	45.5	74.6	1.1	42.9	78.9	416.2	76.7	.1043
0	..6	74.7	.91	44.4	78.9	416.	76.8	.0974
0	49.7	74.7	.81	46.7	78.9	415.6	76.8	.0909
0	5..1	74.7	.71	48.4	79.	415.6	76.9	.0824
0	5..2	74.9	.60	48.8	79.1	415.6	77.0	.0704
0	5..6	75.1	.50	49.5	79.3	415.6	77.2	.0596
0	5..6	75.4	.41	49.7	79.6	415.6	77.5	.0487
0	5..6	75.9	.30	49.9	80.0	415.6	78.0	.0359
0	5..1	76.4	.25	49.5	8..3	416.2	78.3	.0301

TABLE 74

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART A

TEST DESCRIPTION Clean Condition - Flow Rate versus Differential Pressure (Test Specimen [S/N 6] Inlet Pressure 415 psia (nominal)

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSI_A)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSI_A)	TEMP (DEG. F)	PRESSURE (PSI_A)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
[illegible]	[illegible]	77.1	.20	50.5	80.7	416.2	78.9	.0246
[illegible]	49.1	77.8	.13	48.6	81.1	416.9	79.4	.0151

TABLE 74

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART A TEST DESCRIPTION Clean Condition - Flow Rate versus Differential Pressure (Test Specimen [S/N 6] Inlet Pressure 415 psia (nominal)

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (LBM/SEC)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
413.0	82.5	.0149	17.119	17.056	17.087	-0.000	17.087
413.0	82.4	.0254	29.956	29.837	29.896	.000	29.896
411.7	82.1	.0333	36.389	36.161	36.275	.000	36.275
424.7	81.7	.0382	44.461	44.172	44.386	.000	44.386
424.0	81.2	.0450	57.157	57.520	57.339	.000	57.339
422.7	80.4	.0564	74.903	74.903	74.853	.000	74.853
422.1	79.8	.0682	94.992	95.130	95.016	.001	95.016
421.8	78.8	.0756	108.570	108.720	108.720	.001	108.720
421.1	78.4	.0846	126.418	126.418	126.418	.001	126.418
418.8	77.7	.0942	148.858	148.858	148.858	.001	148.858
417.5	77.2	.1035	173.193	173.193	173.193	.002	173.193
416.2	76.7	.1143	173.825	173.825	173.825	.002	173.825
416.2	76.8	.0974	155.495	155.495	155.495	.001	155.495
415.6	76.8	.0909	138.428	138.428	138.428	.001	138.428
415.6	76.9	.0824	120.731	120.731	120.730	.001	120.730
415.6	77.0	.0794	98.984	97.974	98.129	.001	98.129
415.6	77.2	.0596	79.586	79.012	79.148	.000	79.148
415.6	77.5	.0487	61.469	61.829	61.649	.000	61.649
415.6	78.1	.0359	43.984	44.768	43.876	.000	43.876
416.2	78.3	.0301	35.956	35.701	35.829	.000	35.829

TABLE 74

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART A TEST DESCRIPTION Clean Condition - Flow Rate versus Differential Pressure (Test Specimen [S/N 6] Inlet Pressure 415 psia (nominal)

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
416.2	78.9	.0246	28.246	28.157	28.201	.000	28.201
416.9	79.4	.0151	17.155	16.998	17.152	.0000	17.152

TARE DIFF. PRESS = -3.40000E-05 + -4.44300E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 74

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART A TEST DESCRIPTION Clean Condition - Flow Rate versus Differential Pressure (Test Specimen [S/N 6] Inlet Pressure 415 psia (nominal)

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSI	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.837	413.7	301.2	28.0	82.5	11.6	.0149	.410	.803	1.781	1.2013	17.087
29.837	413.	301.2	28.0	82.4	19.7	.0254	.696	1.371	3.022	2.1019	29.896
28.946	411.7	301.1	27.8	82.1	23.5	.0303	.830	1.636	3.601	2.5504	36.275
29.857	424.7	300.8	27.6	81.7	29.0	.0362	1.023	2.015	4.443	3.1207	44.386
29.812	424.1	300.5	27.3	81.2	36.0	.0458	1.271	2.505	5.517	4.0313	57.339
29.721	422.7	300.1	26.9	80.4	45.1	.0564	1.591	3.133	6.907	5.2627	74.853
29.675	422.1	299.7	26.5	79.8	54.5	.0682	1.923	3.787	8.349	6.6803	95.016
29.584	421.8	299.2	26.1	78.8	60.3	.0756	2.129	4.193	9.244	7.6438	108.720
29.538	420.1	298.9	25.8	78.4	67.4	.0846	2.379	4.684	10.327	8.8881	126.418
29.447	419.8	298.5	25.4	77.7	74.9	.0942	2.645	5.207	11.480	10.4657	148.858
29.356	417.5	298.3	25.1	77.2	82.1	.1035	2.901	5.713	12.595	12.1767	173.193
29.265	416.2	298.	24.9	76.7	82.6	.1043	2.917	5.743	12.662	12.2211	173.825
29.265	416.2	298.2	24.9	76.8	77.1	.0974	2.724	5.364	11.825	10.9324	155.495
29.219	415.6	298.0	24.9	76.8	71.8	.0909	2.537	4.995	11.013	9.7325	138.428
29.219	415.6	298.1	24.9	76.9	65.1	.0824	2.300	4.533	9.996	8.4881	120.730
29.219	415.6	298.2	25.0	77.0	55.6	.0704	1.964	3.867	8.525	6.8992	98.129
29.219	415.6	298.3	25.1	77.2	47.1	.0596	1.663	3.274	7.217	5.5647	79.148
29.219	415.6	298.4	25.3	77.5	38.5	.0487	1.359	2.676	5.899	4.3343	61.649
29.219	415.6	298.7	25.5	78.0	28.3	.0359	1.000	1.970	4.342	3.0848	43.876
29.265	416.2	298.9	25.7	78.3	23.8	.0301	.839	1.651	3.640	2.5190	35.829

DATE: 4/29/76

TABLE 74

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART A TEST DESCRIPTION Clean Condition - Flow Rate versus Differential Pressure (Test Specimen [S/N 6] Inlet Pressure 415 psia (nominal)

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS:	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSI	DEG. K	DEG. C	DEG. F	LITERS/ MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
28.265	410.2	299.2	26.1	78.9	19.4	.0246	.686	1.350	2.976	1.9827	28.201
29.311 *****	410.9 *****	299.5 *****	26.3 *****	79.4 *****	11.9	.151	.421	.829	1.827	1.2059	17.152
29.350	417.5	299.2	26.1	78.8							
.199	2.5	.9	.9	1.7	DEVIATIONS						

TABLE 75

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 4/29/76

TEST NUMBER 5 PART B

TEST DESCRIPTION: Clean Condition - Flow Rate versus Differential Pressure (Test Specimen [S/N 6] Inlet Pressure 700 psia (nominal)

FLOWMETER ONE			FLOWMETER TWO			TEST SPECIMEN INLET CONDITIONS		
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
[illegible]	50.6	75.0	.13	50.5	74.1	690.3	75.6	.0097
[illegible]	50.8	74.2	.20	50.5	76.4	686.4	75.3	.0147
[illegible]	51.0	73.3	.25	50.7	76.5	690.3	74.9	.0187
[illegible]	51.2	72.6	.29	50.7	76.5	686.4	74.5	.0217
[illegible]	49.7	71.4	.39	49.[illegible]	76.4	686.4	73.9	.0280
[illegible]	48.7	71.1	.49	48.0	75.9	686.4	73.0	.0344
[illegible]	48.2	67.3	.59	47.1	75.0	686.4	71.7	.0406
	48.3	66.4	.69	47.[illegible]	73.8	686.4	70.1	.0474
	48.2	64.7	.80	46.5	72.3	689.5	68.5	.0544
[illegible]	47.5	63.3	.90	46.[illegible]	71.9	682.5	67.1	.0613
[illegible]	48.0	61.6	1.01	45.4	68.9	694.3	65.2	.0660
[illegible]	48.[illegible]	61.8	1.[illegible]1	45.4	67.4	690.3	64.1	.0663
[illegible]	48.2	61.9	.90	46.[illegible]	67.[illegible]	690.3	64.0	.0605
[illegible]	51.2	61.0	.80	48.6	67.1	690.3	64.0	.0562
[illegible]	51.2	61.3	.70	48.6	67.4	690.3	64.3	.0490
[illegible]	51.2	61.9	.60	49.0	67.8	690.3	64.8	.0422
[illegible]	51.2	62.2	.49	49.4	68.2	690.3	65.2	.0353
[illegible]	49.1	63.[illegible]	.39	48.4	68.9	690.[illegible]	65.9	.0277
	48.9	64.1	.30	48.4	69.6	690.3	66.9	.0207
	51.1	64.9	.25	49.5	70.4	690.3	67.6	.0179

TABLE 75

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

PAGE: 2

DATE: 4/29/76

TEST NUMBER 5 PART B TEST DESCRIPTION Clean Condition - Flow Rate versus Differential Pressure (Test Specimen [S/N 6] Inlet Pressure 700 psia (nominal)

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
0	48.7	65.8	.20	48.4	70.9	690.3	68.4	.0138
0	47.4	66.9	.13	47.1	71.6	689.3	69.2	.0087

TABLE 75

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART B TEST DESCRIPTION Clean Condition - Flow Rate versus Differential Pressure (Test Specimen [S/N 6] Inlet Pressure 700 psia (nominal)

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (LBM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
690.3	75.6	.0097	10.019	9.970	9.995	-0.001	9.995
686.4	75.3	.0147	15.019	14.997	15.008	-0.001	15.008
690.3	74.9	.0187	19.636	19.516	19.577	-0.001	19.578
686.4	74.5	.0217	23.193	23.009	23.101	-0.001	23.102
686.4	73.9	.0280	30.789	30.641	30.715	-0.001	30.716
686.4	73.0	.0344	38.868	38.580	38.724	-0.001	38.724
686.4	71.7	.0426	47.301	46.885	47.093	-0.001	47.094
686.4	70.1	.0474	56.848	56.116	56.482	-0.001	56.483
682.5	68.5	.0544	67.610	66.242	66.626	-0.000	66.626
682.5	67.1	.0613	78.013	77.001	77.507	-0.000	77.507
694.3	65.2	.0666	85.955	85.861	85.908	.000	85.909
690.3	64.1	.0663	85.955	85.861	85.908	.000	85.909
690.3	64.0	.0605	76.267	76.368	76.318	-0.000	76.318
690.3	64.0	.0562	69.815	69.606	69.210	-0.000	69.211
690.3	64.3	.0490	58.731	58.964	58.847	-0.000	58.848
690.3	64.8	.0422	50.749	49.774	49.961	-0.001	49.962
690.3	65.2	.0353	40.054	40.423	40.638	-0.001	40.639
690.3	65.9	.0277	30.789	30.354	30.572	-0.001	30.572
690.3	66.9	.0207	22.597	22.093	22.300	-0.001	22.300
690.3	67.6	.0179	19.302	18.829	19.015	-0.001	19.016

TABLE 75

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 4/29/76

TEST NUMBER 5 PART B TEST DESCRIPTION Clean Condition - Flow Rate versus Differential Pressure (Test Specimen [S.N 6] Inlet Pressure 700 psia (nominal)

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
690.3	64.4	.0138	14.519	14.254	14.386	-0.001	14.387
691.3	69.2	.0087	9.206	8.886	9.046	-0.001	9.047

TARE DIFF. PRESS = -3.60000E-04 + -3.31616E-02 (ACFM) + 6.33359E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 75

DATE: 4/29/76

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART B TEST DESCRIPTION Clean Condition - Flow Rate versus Differential Pressure (Test Specimen [S/N 6] Inlet Pressure 700 psia (nominal)

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	CFM	SCFM	GN_2 KG/HR	GN_2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
48.536	690.3	297.4	24.2	75.6	12.8	.0097	.452	.890	1.962	.7027	9.995
48.260	686.4	297.2	24.1	75.3	19.2	.0147	.678	1.334	2.941	1.0552	15.008
48.536	690.3	297.0	23.8	74.9	24.6	.0187	.868	1.710	3.769	1.3764	19.578
48.260	686.4	296.8	23.6	74.5	28.4	.0217	1.003	1.976	4.355	1.6242	23.102
48.260	686.4	296.4	23.3	73.9	36.8	.0280	1.300	2.559	5.642	2.1595	30.716
48.260	686.4	296.0	22.8	73.0	45.3	.0344	1.599	3.149	6.942	2.7226	38.724
48.260	686.4	295.2	22.0	71.7	53.5	.0406	1.889	3.719	8.199	3.3110	47.094
48.260	686.4	294.3	21.1	70.1	62.6	.0474	2.211	4.353	9.597	3.9711	56.483
47.985	682.5	293.4	20.3	68.5	71.8	.0544	2.535	4.991	11.003	4.6843	66.626
47.985	682.5	292.6	19.5	67.1	81.0	.0613	2.861	5.633	12.420	5.4493	77.507
48.811	694.3	291.6	18.5	65.2	89.0	.0660	3.143	6.189	13.644	6.0400	85.909
48.536	690.3	291.0	17.8	64.1	89.2	.0663	3.150	6.202	13.674	6.0400	85.909
48.536	690.3	290.9	17.8	64.0	81.3	.0605	2.872	5.655	12.467	5.3687	76.318
48.536	690.3	291.0	17.8	64.0	75.6	.0562	2.671	5.259	11.595	4.8660	69.211
48.536	690.3	291.1	18.0	64.3	65.8	.0490	2.325	4.579	10.095	4.1374	58.848
48.536	690.3	291.4	18.2	64.8	56.7	.0422	2.003	3.943	8.693	3.5127	49.962
48.536	690.3	291.6	18.5	65.2	47.4	.0353	1.674	3.296	7.267	2.8572	40.639
48.536	690.3	292.0	18.9	65.9	37.1	.0277	1.310	2.579	5.686	2.1494	30.572
48.536	690.3	292.5	19.4	66.9	27.7	.0207	.978	1.925	4.244	1.5679	22.300
48.536	690.3	293.0	19.8	67.6	23.9	.0179	.843	1.660	3.660	1.3369	19.016

TABLE 75

DATE: 4/29/76

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART 3 TEST DESCRIPTION Clean Condition - Flow Rate versus Differential Pressure (Test Specimen [S/N 6] Inlet Pressure 700 psia (nominal)

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/ MIN	SCFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
48.536	690.3	293.4	20.2	68.4	18.5	.0138	.652	1.284	2.832	1.0115	14.387
48.530	69.3	293.9	20.7	69.2	11.6	.0097	.409	.809	1.777	.6361	9.047
*****	*****	*****	******	******							
48.423	688.7	293.6	20.5	68.8							
.168	2.4	2.0	2.0	3.5	DEVIATIONS						

TABLE 76

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 4/29/76

TEST NUMBER 5 PART C

TEST DESCRIPTION Clean Condition - Flow Rate versus Differential Pressure (Test Specimen [S/N 6] Inlet Pressure 1000 psia (nominal)

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
0	[illegible].1	[illegible].4	.13	49.7	[illegible].0	1006.7	82.2	.0063
0	[illegible].1	[illegible].3	.21	49.5	83.2	1006.7	81.7	.0102
0	[illegible].7	79.3	.25	49.4	82.1	1006.7	81.2	.0125
0	[illegible].7	78.3	.31	49.2	83.0	1002.7	80.6	.0150
0	[illegible].2	76.4	.41	49.5	82.4	1002.7	79.4	.0200
0	[illegible].9	74.[illegible]	.5[illegible]	49.[illegible]	81.4	1002.7	77.7	.0242
0	[illegible].5	71.[illegible]	.60	[illegible].[illegible]	79.9	1002.7	75.7	.0289
0	[illegible].3	69.1	.70	47.6	78.2	1002.7	73.6	.0335
0	[illegible].9	[illegible]7.[illegible]	.8	47.3	76.[illegible]	998.7	71.6	.0379
0	[illegible].[illegible]	64.5	.91	[illegible]7.1	7[illegible].7	998.7	69.1	.0427
0	[illegible].9	62.9	1.[illegible]1	46.3	71.8	994.8	67.4	.0471
0	[illegible].9	61.5	1.[illegible]1	46.3	69.[illegible]	994.8	65.5	.0471
0	[illegible].1	[illegible]61.[illegible]	.91	[illegible]7.8	69.[illegible]	994.8	65.3	.0436
0	[illegible].5	61.8	.80	47.6	69.0	994.8	65.4	.0385
0	[illegible].1	62.2	.7[illegible]	47.6	69.[illegible]	994.8	65.7	.0334
0	[illegible].9	[illegible].[illegible]	.60	[illegible]7.8	69.6	994.8	66.2	.0290
0	[illegible].5	63.3	.50	48.4	70.1	990.8	66.7	.0244
0	[illegible].3	64.5	.4	48.6	71.[illegible]	990.8	67.8	.0197
0	[illegible].7	[illegible]5.8	.3	48.2	72.	994.8	68.9	.0145
[illegible]	[illegible].[illegible]	66.7	.25	8.8	72.7	994.8	69.7	.0123

TABLE 76

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 4/29/76

TEST NUMBER 5 PART C TEST DESCRIPTION Clean Condition - Flow Rate versus Differential Pressure (Test Specimen [S/N 6] Inlet Pressure 1000 psia (nominal)

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
0	49.5	67.2	.20	49.1	73.4	994.0	70.6	.0096
0	49.3	69.2	.14	48.8	74.4	994.8	71.8	.0067

TABLE 76

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 4/29/76

TEST NUMBER 5 PART C TEST DESCRIPTION Clean Condition - Flow Rate versus Differential Pressure (Test Specimen [S/N 6] Inlet Pressure 1000 psia (nominal)

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (LBM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1006.7	82.2	.0063	6.991	6.990	6.991	=0.000	6.891
1006.7	81.7	.0102	11.120	11.112	11.066	=0.000	11.066
1006.7	81.2	.125	13.895	13.911	13.903	=0.000	13.903
1002.7	80.6	.0150	16.837	16.826	16.828	=0.000	16.828
1002.7	79.4	.0206	23.113	23.087	23.099	=0.000	23.099
1002.7	77.7	.0252	28.823	28.803	28.863	=0.000	28.863
1002.7	75.7	.0289	35.389	35.241	35.315	=0.000	35.315
1002.7	73.6	.0335	41.900	41.749	41.829	=0.000	41.829
998.7	71.6	.0379	48.416	48.156	48.286	=0.000	48.286
998.7	69.1	.0427	55.884	55.624	55.754	=0.000	55.755
994.8	67.4	.0471	63.413	63.209	63.311	=0.000	63.311
994.8	65.5	.0471	63.464	63.525	63.595	=0.000	63.595
994.8	65.3	.0436	57.390	57.520	57.455	=0.000	57.456
994.8	65.4	.0385	49.884	49.542	49.691	=0.000	49.691
994.8	65.7	.0334	42.280	41.980	42.130	=0.000	42.130
994.8	66.2	.0290	36.135	35.816	35.976	=0.000	35.976
994.8	66.7	.0244	29.794	29.377	29.586	=0.000	29.586
994.8	67.8	.0197	23.255	22.895	23.075	=0.000	23.075
994.8	68.9	.0145	16.705	16.426	16.565	=0.000	16.566
994.8	69.7	.0120	14.082	13.854	13.968	=0.000	13.968

TABLE 76
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5 PART C TEST DESCRIPTION Clean Condition - Flow Rate versus Differential Pressure (Test Specimen [S/N 6] Inlet Pressure 1000 psia (nominal)

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
994.8	71.8	.0096	10.932	10.598	10.715	-0.000	10.715
994.8	71.8	.0097	7.517	7.347	7.432	-0.000	7.432

TARE DIFF. PRESS = -1.6[illegible]000E-04 + -1.2[illegible]3[illegible]E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 76

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 4/29/76

TEST NUMBER 5 PART C TEST DESCRIPTION Clean Condition - Flow Rate versus Differential Pressure (Test Specimen [S/N 6] Inlet Pressure 1000 psia (nominal)

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
70.775	1006.7	301.0	27.	82.2	12.0	.0063	.423	.832	1.835	.4845	6.891
70.775	1006.7	301.5	27.5	81.7	19.3	.0102	.680	1.340	2.954	.7780	11.066
70.775	1006.7	301.5	27.4	81.5	23.7	.0125	.837	1.647	3.631	.9775	13.903
70.496	1002.7	300.2	27.0	80.6	28.4	.0150	1.003	1.974	4.352	1.1831	16.828
70.496	1002.7	299.5	26.3	79.4	38.0	.0200	1.343	2.645	5.831	1.6240	23.099
70.496	1002.7	298.5	25.4	77.7	46.2	.0244	1.630	3.210	7.077	2.0293	28.863
70.496	1002.7	297.4	24.3	75.7	55.3	.0289	1.953	3.845	8.479	2.4829	35.315
70.496	1002.7	296.3	23.1	73.6	64.2	.0335	2.266	4.462	9.838	2.9409	41.829
70.218	996.7	295.2	22.	71.6	72.8	.0379	2.570	5.060	11.155	3.3948	48.286
70.218	996.7	293.8	20.6	69.1	82.3	.0427	2.906	5.722	12.615	3.9199	55.755
69.939	994.8	292.8	19.6	67.4	90.8	.0471	3.205	6.312	13.915	4.4512	63.311
69.939	994.8	291.8	18.6	65.5	91.1	.0471	3.217	6.334	13.965	4.4712	63.595
69.939	994.8	291.6	18.5	65.3	84.2	.0436	2.975	5.858	12.914	4.0395	57.456
69.939	994.8	291.7	18.6	65.4	74.4	.0385	2.627	5.173	11.404	3.4937	49.691
69.939	994.8	291.9	18.7	65.7	64.5	.0334	2.277	4.483	9.883	2.9621	42.130
69.939	994.8	292.2	19.0	66.2	56.0	.0290	1.977	3.892	8.581	2.5294	35.976
69.661	991.8	292.5	19.3	66.7	46.9	.0244	1.657	3.262	7.191	2.0801	29.586
69.661	991.8	293.0	19.9	67.8	37.8	.0197	1.335	2.628	5.795	1.6223	23.075
69.939	994.8	293.5	20.5	68.9	27.8	.0145	.983	1.936	4.265	1.1647	16.566
69.939	994.8	294.1	21.0	69.7	23.6	.0123	.834	1.641	3.618	.9820	13.968

TABLE 76

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 4/29/76

TEST NUMBER 5 PART C TEST DESCRIPTION Clean Condition - Flow Rate versus Differential Pressure (Test Specimen [S/N 6] Inlet Pressure 1000 psia (nominal)

TEST SPECIMEN INLET CONDITIONS									NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE					
KG/SQ CM	PSIA	DEG. F	DEG. C	DEG. F	LITERS/MIN	CFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
69.939	994.2	294.6	21.5	70.6	18.5	.0066	.652	1.284	2.831	.7534	10.715
69.939	994.5	295.3	22.1	71.8	12.8	.0067	.452	.890	1.962	.5225	7.432
*****	*****	*****	******	******							
70.180	998.2	295.4	22.2	72.0							
.313	4.5	.1	.0	.1	DEVIATIONS						

TABLE 77

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 4/28/76

TEST NUMBER 5 PART D

TEST DESCRIPTION Clean Condition - Flow Rate versus Differential Pressure (Test Specimen [S/N 6] Inlet Pressure 2900 psia (nominal)

FLOWMETER CONDITIONS

FLOWMETER ONE			FLOWMETER TWO			TEST SPECIMEN INLET CONDITIONS		
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
0	50.1	78.6	.13	49.7	78.9	2887.8	78.8	.0022
0	51.0	77.2	.20	50.4	78.9	2887.8	78.1	.0035
0	51.0	75.6	.25	50.6	78.8	2891.9	77.2	.0044
0	50.8	73.2	.29	50.2	78.4	2891.9	75.8	.0051
0	49.1	69.8	.40	48.3	77.6	2891.9	73.7	.0066
0	48.9	65.2	.49	47.9	76.0	2891.9	70.6	.0082
0	49.5	58.6	.59	48.1	72.7	2891.9	65.6	.0098
0	49.7	52.7	.69	48.1	68.9	2887.8	60.8	.0116
0	50.6	48.0	.80	48.7	65.1	2887.8	56.6	.0135
0	49.1	45.0	.90	46.8	61.7	2887.8	53.4	.0145
0	48.9	42.6	.90	46.6	58.5	2887.8	50.5	.0149
0	50.2	42.0	.79	48.3	57.0	2883.8	49.5	.0132
0	50.4	43.4	.69	48.7	57.7	2883.8	50.5	.0117
0	49.5	44.1	.59	48.1	58.0	2883.8	51.1	.0098
0	49.1	44.9	.50	47.9	58.6	2883.8	51.7	.0083
0	51.1	46.0	.40	49.3	59.4	2883.8	52.7	.0068
0	49.9	47.6	.29	49.1	60.4	2883.8	54.0	.0049
0	49.5	49.3	.25	48.9	61.7	2887.8	55.5	.0043
0	49.3	51.2	.20	48.7	63.0	2887.8	57.1	.0035
0	49.3	52.2	.13	48.1	64.2	2887.8	58.7	.0022

TABLE 77

FLOW RATE ANALYSIS DIFFERENTIAL PRESSURE

DATE: 4/28/76

TEST NUMBER 6 PART 0 TEST DESCRIPTION Clean Condition - Flow Rate versus Differential Pressure (Test Specimen [S/N 6] Inlet Pressure 2900 psia (nominal)

TEST SPECIFIED INLET CONDITIONS
****

PRESSURE (PSIA)	AVG T_IP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
2887.8	73.5	.0022	3.109	3.188	3.148	-0.000	3.148
2887.8	73.1	.0035	4.923	5.010	4.966	-0.000	4.966
2891.9	77.2	.0044	6.299	6.378	6.339	.000	6.339
2891.9	75.2	.0051	7.361	7.462	7.412	.000	7.412
2891.9	73.7	.0066	9.193	9.579	9.885	.000	9.886
2891.9	71.6	.0082	12.585	12.598	12.541	.000	12.541
2891.9	69.5	.0098	15.478	15.571	15.524	-0.000	15.525
2887.3	67.4	.0116	18.783	18.832	18.807	-0.001	18.808
2887.8	66.6	.0135	22.459	22.498	22.478	-0.002	22.478
2887.8	51.4	.0145	24.824	24.848	24.835	-0.003	24.836
2887.8	50.5	.0145	24.947	24.963	24.955	-0.003	24.955
2883.8	49.5	.0132	22.395	22.326	22.361	-0.002	22.361
2883.8	51.5	.0117	19.532	19.576	19.553	-0.001	19.554
2883.8	51.1	.0098	16.764	16.085	16.125	-0.000	16.125
2883.8	51.7	.0083	13.595	13.284	13.289	.000	13.290
2883.8	52.7	.0068	10.611	10.543	10.577	.000	10.577
2883.5	54.1	.0049	7.736	7.576	7.656	.000	7.656
2887.8	55.5	.0043	6.549	6.435	6.492	.000	6.492
2887.8	57.1	.0035	5.236	5.124	5.180	-0.000	5.180
2887.8	58.7	.0022	3.234	3.188	3.211	-0.000	3.211

T -E DIFF. PRESS = -1.24600E-03 + 4.8845E-01 (ACFM) + -4.0072E 01 (ACFM)**2 + 0 (ACFM)**3

TABLE 77

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 6 PART 5 TEST DESCRIPTION Clean Condition - Flow Rate versus Differential Pressure (Test Specimen [S/N 6] Inlet Pressure 2900 psia (nominal)

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSI	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
203.033	2887.5	299.1	26.0	78.8	12.0	.0022	.425	.839	1.844	.2213	3.148
203.033	2887.5	298.8	25.6	78.1	19.1	.0035	.674	1.332	2.926	.3491	4.966
203.319	2891.4	298.3	25.1	77.2	24.2	.0044	.853	1.687	3.703	.4457	6.339
203.319	2891.4	297.5	24.3	75.8	28.0	.0051	.988	1.945	4.287	.5211	7.412
203.318	2891.3	296.3	23.1	73.7	36.6	.0066	1.291	2.541	5.602	.6950	9.886
203.319	2891.4	294.6	21.5	70.6	45.5	.0082	1.606	3.162	6.972	.8817	12.541
203.319	2891.4	291.9	18.7	65.6	55.1	.0098	1.945	3.829	8.441	1.0918	15.525
203.033	2887.5	289.2	16.0	60.8	65.4	.0116	2.311	4.550	10.030	1.3223	18.808
203.033	2887.5	286.4	13.6	56.6	76.9	.0135	2.714	5.344	11.781	1.5804	22.478
203.033	2887.5	285.	11.9	53.4	83.3	.0145	2.943	5.790	12.777	1.7461	24.836
203.033	2887.5	283.5	10.3	50.5	83.8	.0145	2.959	5.821	12.847	1.7545	24.955
202.749	2883.4	282.9	9.7	49.5	76.4	.0132	2.699	5.315	11.717	1.5721	22.361
202.749	2883.4	283.5	10.3	50.5	67.4	.0117	2.379	4.684	10.326	1.3748	19.554
202.749	2883.4	283.8	10.6	51.1	56.6	.0098	2.000	3.938	8.681	1.1337	16.125
202.749	2883.4	284.1	11.0	51.7	47.5	.0083	1.677	3.303	7.282	.9344	13.290
202.749	2883.4	284.7	11.5	52.7	38.8	.0068	1.370	2.697	5.946	.7436	10.577
202.749	2883.4	285.4	12.2	54.1	28.3	.0049	1.000	1.969	4.341	.5383	7.686
203.033	2887.5	286.2	13.1	55.5	24.5	.0043	.864	1.702	3.753	.4565	6.492
203.033	2887.5	287.1	14.0	57.1	19.7	.0035	.695	1.369	3.017	.3642	5.180
203.033 *****	2887.5 *****	288. *****	14.8 *****	58.7 *****	12.3	.0022	.434	.854	1.882	.2257	3.211
203.019	2886.5	289.3	16.2	61.1							
.102	2.3	5.1	5.1	9.2	DEVIATIONS						

TABLE 78

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 56 PART 6 TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE- TEST SPECIMEN [S/N 020] INLET PRESSURE 415 PSIA (NOMINAL).

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.14	49.5	78.5	.13	49.1	79.1	411.4	78.8	.0164
.22	49.1	78.2	.21	48.9	78.9	410.9	78.6	.0261
.28	49.9	77.7	.26	49.5	78.9	416.1	78.3	.0323
.32	49.1	77.5	.31	48.7	78.7	415.5	78.1	.0370
.41	49.7	76.9	.41	49.1	78.4	414.8	77.7	.0489
.51	50.1	76.5	.50	49.1	78.2	413.5	77.4	.0606
.60	49.9	76.1	.60	48.7	77.9	412.9	77.0	.0717
.69	49.5	75.8	.71	48.3	77.6	411.6	76.7	.0830
.79	50.2	74.1	.81	48.5	72.9	416.1	73.5	.0951
.88	49.7	74.2	.91	47.8	73.2	415.5	73.7	.1046
.88	49.7	74.4	.91	47.8	73.6	415.5	74.0	.1048
.79	49.7	74.6	.81	47.9	74.0	415.5	74.3	.0937
.69	50.2	74.8	.70	48.9	74.5	415.5	74.6	.0834
.60	50.2	74.8	.60	49.1	74.5	416.1	74.7	.0720
.51	50.1	75.0	.51	49.3	74.6	416.1	74.8	.0608
.41	50.1	75.2	.40	49.3	74.8	416.8	75.0	.0485
.32	50.1	75.5	.30	49.9	75.0	416.8	75.3	.0372
.27	50.2	75.8	.26	49.9	75.3	417.4	75.5	.0316
.22	49.9	75.9	.21	49.7	75.5	417.4	75.7	.0254
.15	50.1	76.2	.14	49.9	75.5	418.1	75.9	.0174

TABLE 78

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 56 PART G TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE - TEST SPECIMEN S/N 020 INLET PRESSURE 415 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
411.9	78.8	.0164	17.686	17.663	17.674	-0.000	17.674
410.9	78.6	.0261	29.509	29.342	29.425	.000	29.425
416.1	78.3	.0323	37.620	37.382	37.501	.000	37.501
415.5	78.1	.0370	44.159	43.829	43.994	.000	43.994
414.8	77.7	.0489	59.473	60.786	60.130	.000	60.130
413.5	77.4	.0606	77.218	78.801	78.010	.000	78.010
412.9	77.0	.0717	98.080	98.080	98.080	.001	98.080
411.9	76.7	.0830	118.939	118.939	118.939	.001	118.939
416.1	73.5	.0951	144.538	144.538	144.538	.001	144.538
415.5	73.7	.1046	167.610	167.610	167.610	.002	167.610
415.5	74.0	.1048	167.294	167.294	167.294	.002	167.294
415.5	74.3	.0937	140.746	140.746	140.746	.001	140.746
415.5	74.6	.0834	118.307	118.307	118.307	.001	118.307
416.1	74.7	.0720	96.594	97.448	97.021	.001	97.021
416.1	74.8	.0608	77.591	78.169	77.880	.000	77.880
416.5	75.0	.0485	58.846	59.206	59.026	.000	59.026
416.9	75.3	.0372	43.786	43.484	43.635	.000	43.635
417.9	75.5	.0316	36.561	36.232	36.396	.000	36.396
417.4	75.7	.0254	28.697	28.309	28.503	.000	28.503
418.1	75.9	.0174	19.002	18.691	18.847	.000	18.847

TARE DIFF. PRESS = -3.40000E-05 + -4.44000E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0. (ACFM)**3

TABLE 78

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 50 PART G TEST DESCRIPTION CLEAN CONDITION - FLOW RATE VERSUS. DIFFERENTIAL PRESSURE - TEST SPECIMEN S/N 020 INLET PRESSURE 415 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE		TEMPERATURE			FLOW RATE					NET DIFFERENTIAL PRESS.	
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN_2 KG/HR	GN_2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
28.937	411.9	299.1	26.0	78.8	12.2	.0164	.452	.890	1.962	1.2426	17.674
28.891	410.7	299.0	25.9	78.6	19.9	.0261	.718	1.414	3.117	2.0688	29.425
29.256	416.1	298.9	25.7	78.3	24.8	.0323	.900	1.772	3.907	2.6366	37.501
29.210	415.7	298.8	25.6	78.1	28.7	.0370	1.031	2.029	4.474	3.0931	43.994
29.165	414.8	298.5	25.4	77.7	38.1	.0489	1.361	2.681	5.910	4.2275	60.130
29.073	413.7	298.4	25.2	77.4	47.0	.0606	1.680	3.308	7.293	5.4846	78.010
29.028	412.7	298.2	25.0	77.0	55.7	.0717	1.988	3.914	8.630	6.8957	98.080
28.937	411.9	298.0	24.8	76.7	64.9	.0830	2.296	4.521	9.968	8.3622	118.939
29.256	416.1	296.2	23.1	73.5	75.6	.0951	2.675	5.269	11.611	10.1621	144.538
29.210	415.7	296.3	23.2	73.7	83.1	.1046	2.937	5.783	12.749	11.7841	167.610
29.210	415.7	296.5	23.3	74.0	83.2	.1048	2.941	5.790	12.766	11.7619	167.295
29.210	415.5	296.7	23.5	74.3	74.1	.0937	2.628	5.179	11.409	9.8954	140.748
29.210	415.7	296.8	23.7	74.6	65.8	.0834	2.336	4.600	10.142	8.3178	118.307
29.256	416.1	296.9	23.7	74.7	56.5	.0720	2.021	3.979	8.772	6.8212	97.021
29.256	416.1	296.9	23.8	74.8	47.7	.0608	1.706	3.359	7.404	5.4755	77.880
29.302	416.8	297.1	23.9	75.0	37.8	.0485	1.362	2.681	5.912	4.1499	59.026
29.302	416.8	297.2	24.0	75.3	28.9	.0372	1.044	2.059	4.531	3.0678	43.635
29.347	417.4	297.3	24.2	75.5	24.5	.0316	.889	1.750	3.858	2.5589	36.396
29.347	417.4	297.4	24.3	75.7	19.7	.0254	.713	1.404	3.096	2.0040	28.503
29.393 *****	418.1 *****	297.5 *****	24.4 ******	75.9 ******	13.3	.0174	.489	.964	2.124	1.3250	18.847
29.190	415.4	297.6	24.4	76.0							
.111	1.9	.8	.8	1.5	DEVIATIONS						

TABLE 79

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 7-8-76

TEST NUMBER F5 PART F TEST DESCRIPTION CLEAN CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE (TEST SPECIMEN S/N 020) INLET PRESSURE 700 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (LBM/SEC)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
703.9	87.8	.0093	9.422	9.400	9.411	-0.001	9.411
703.9	87.7	.0153	16.026	15.855	15.940	-0.001	15.941
703.9	87.6	.0186	19.909	19.745	19.827	-0.001	19.828
703.9	87.4	.0222	24.219	23.985	24.102	-0.001	24.103
703.9	87.1	.0282	31.351	31.217	31.284	-0.001	31.285
703.9	86.7	.0351	40.493	40.310	40.401	-0.001	40.402
703.9	86.2	.0418	49.797	49.303	49.550	-0.001	49.551
700.0	85.6	.0481	57.331	57.520	57.426	-0.000	57.426
700.0	85.3	.0544	66.602	67.002	66.802	-0.000	66.802
700.0	85.0	.0619	78.458	78.695	78.577	.000	78.577
700.0	84.5	.0613	77.339	77.747	77.543	-0.000	77.544
700.0	84.7	.0542	66.476	67.002	66.739	-0.000	66.740
700.0	84.9	.0486	58.083	58.469	58.276	-0.000	58.276
700.0	85.3	.0418	49.858	49.303	49.581	-0.001	49.581
700.0	85.8	.0350	40.309	39.906	40.108	-0.001	40.108
700.0	86.3	.0282	31.597	31.217	31.407	-0.001	31.408
700.0	86.8	.0220	23.973	23.641	23.807	-0.001	23.808
703.9	87.4	.0179	19.231	18.887	19.059	-0.001	19.060
703.9	87.8	.0150	15.902	15.626	15.764	-0.001	15.765
703.9	88.4	.0098	10.101	9.800	9.950	-0.001	9.951

TARE DIFF. PRESS = -3.60000E-04 + -3.31610E-02 (ACFM) + 6.33359E-01 (ACFM)**2 + 0 (ACFM)**3

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TABLE 79

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER F5 PART F TEST DESCRIPTION CLEAN CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE (TEST SPECIMEN S/N 020) INLET PRESSURE 700 PSIA (NOMINAL)

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.14	49.3	87.7	.13	49.1	87.9	703.9	87.8	.0093
.23	48.7	87.4	.22	48.3	88.0	703.9	87.7	.0153
.27	48.9	87.5	.26	48.5	88.0	703.9	87.6	.0186
.32	49.3	86.9	.31	48.7	88.0	703.9	87.4	.0222
.41	49.3	86.2	.40	48.7	87.9	703.9	87.1	.0282
.51	49.3	85.5	.51	48.9	87.9	703.9	86.7	.0351
.60	49.5	84.8	.60	48.3	87.7	703.9	86.2	.0418
.68	49.5	83.9	.70	47.9	87.3	700.0	85.6	.0481
.77	49.1	83.6	.80	47.6	87.0	700.0	85.3	.0544
.87	49.7	83.2	.91	47.6	86.7	700.0	85.0	.0619
.87	49.3	83.7	.91	47.2	86.3	700.0	84.5	.0613
.77	49.1	83.9	.80	47.4	86.4	700.0	84.7	.0542
.69	49.5	83.2	.71	47.9	86.5	700.0	84.9	.0486
.60	49.5	83.7	.60	48.5	87.0	700.0	85.3	.0418
.50	49.3	84.2	.50	48.3	87.4	700.0	85.8	.0350
.41	49.5	84.8	.40	48.9	87.7	700.0	86.3	.0282
.31	49.9	85.5	.31	49.5	88.1	700.0	86.8	.0220
.26	49.5	86.2	.25	49.1	98.6	703.9	87.4	.0179
.22	50.2	86.8	.21	50.1	88.8	703.9	87.8	.0150
.14	49.7	87.6	.13	49.3	89.2	703.9	88.4	.0098

TABLE 79

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER F5 PART F TEST DESCRIPTION CLEAN CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE (TEST SPECIMEN S/N 020) INLET PRESSURE 700 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS									NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE					
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
49.489	703.9	304.1	31.0	87.8	11.7	.0093	.432	.852	1.877	.6617	9.411
49.489	703.9	304.1	31.0	87.7	19.5	.0150	.707	1.393	3.071	1.1208	15.941
49.489	703.9	304.0	30.9	87.6	23.9	.0186	.862	1.698	3.743	1.3940	19.828
49.489	703.9	304.0	30.8	87.4	28.6	.0222	1.031	2.031	4.477	1.6946	24.103
49.489	703.9	303.7	30.6	87.1	36.4	.0282	1.308	2.579	5.680	2.1995	31.285
49.489	703.9	303.5	30.4	86.7	45.6	.0351	1.629	3.207	7.071	2.8405	40.402
49.489	703.9	303.3	30.1	86.2	54.7	.0418	1.942	3.825	8.432	3.4838	49.551
49.212	700.9	303.0	29.8	85.6	60.7	.0481	2.225	4.380	9.657	4.0375	57.426
49.212	700.9	302.8	29.6	85.3	71.6	.0544	2.520	4.964	10.939	4.6967	66.802
49.212	700.9	302.6	29.4	85.0	81.2	.0619	2.868	5.647	12.449	5.5245	78.577
49.212	700.9	302.3	29.1	84.5	80.5	.0613	2.842	5.597	12.338	5.4519	77.544
49.212	700.9	302.4	29.3	84.7	71.2	.0542	2.512	4.947	10.905	4.6923	66.740
49.212	700.9	302.5	29.4	84.9	63.6	.0486	2.253	4.439	9.780	4.0972	58.276
49.212	700.9	302.8	29.6	85.3	54.5	.0418	1.935	3.811	8.401	3.4859	49.581
49.212	700.9	303.0	29.9	85.8	45.2	.0350	1.618	3.185	7.022	2.8199	40.108
49.212	700.9	303.3	30.1	86.3	36.3	.0282	1.304	2.568	5.662	2.2082	31.408
49.212	700.9	303.6	30.4	86.8	28.2	.0220	1.016	2.001	4.411	1.6738	23.808
49.489	703.9	303.9	30.8	87.4	23.0	.0179	.832	1.637	3.610	1.3400	19.060
49.489	703.9	304.2	31.0	87.8	19.2	.0150	.697	1.372	3.026	1.1084	15.765
49.489	703.9	304.5	31.3	88.4	12.2	.0098	.451	.887	1.959	.6996	9.951
*****	*****	*****	******	******							
49.350	701.9	303.4	30.2	86.4							
.138	2.0	.6	.6	1.1	DEVIATIONS						

TABLE 80

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER SE PART F TEST DESCRIPTION CLEAN CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE (TEST SPECIMEN S/N 020) INLET PRESSURE 1,000 PSIA (NOMINAL)

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE, (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.15	50.4	89.4	.13	50.2	87.7	976.3	88.6	.0072
.22	51.0	88.8	.21	50.6	87.8	976.2	88.3	.0113
.27	50.4	88.1	.26	50.2	87.9	972.3	88.0	.0138
.31	50.4	87.4	.31	50.1	87.9	972.3	87.7	.0160
.41	51.0	85.8	.41	50.2	87.8	972.3	86.8	.0213
.50	50.1	84.4	.50	49.3	87.4	972.3	85.9	.0257
.59	50.1	82.8	.60	48.9	86.7	972.3	84.7	.0304
.69	49.9	81.4	.71	48.5	86.1	968.3	83.7	.0355
.77	49.9	79.7	.81	48.3	84.7	968.3	82.2	.0400
.87	49.5	78.7	.91	47.2	83.9	964.3	81.3	.0445
.87	49.1	77.7	.91	47.0	83.7	964.3	80.2	.0444
.78	48.7	77.8	.81	47.0	82.5	964.3	80.1	.0392
.69	49.5	78.1	.71	48.3	82.5	964.3	80.3	.0352
.60	49.5	78.3	.60	48.3	83.6	964.3	80.5	.0304
.50	49.9	79.3	.50	48.9	83.1	964.3	81.2	.0258
.41	50.2	79.9	.40	49.7	83.5	964.3	81.7	.0209
.31	50.1	80.4	.30	49.5	83.9	964.3	82.2	.0157
.26	50.1	81.3	.25	49.9	84.3	964.3	82.8	.0133
.21	50.2	81.8	.21	49.9	84.6	964.3	83.2	.0109
.14	49.7	82.5	.13	49.3	84.9	964.3	83.7	.0070

TABLE 80

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 5E PART F TEST DESCRIPTION CLEAN CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE (TEST SPECIMEN S/N 020) INLET PRESSURE 1,000 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (LBM/SEC)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
976.6	88.6	.0072	7.323	7.613	7.468	=0.000	7.468
976.6	88.3	.113	11.915	12.236	12.075	=0.000	12.076
972.3	88.0	.0118	14.752	15.150	14.951	=0.000	14.951
972.3	87.7	.0160	17.467	17.838	17.652	=0.000	17.653
972.3	86.8	.0213	24.195	24.367	24.231	=0.000	24.231
972.3	85.9	.0257	29.990	30.279	30.135	=0.000	30.135
972.3	84.7	.0314	36.597	36.950	36.773	=0.000	36.774
968.3	83.7	.0355	43.731	44.154	43.943	=0.000	43.943
968.3	82.2	.0410	49.981	50.251	50.116	=0.000	50.116
964.3	81.3	.0445	56.998	57.520	57.259	=0.000	57.259
964.3	80.2	.0444	57.248	57.520	57.384	=0.000	57.385
964.3	80.1	.0392	49.619	49.619	49.619	=0.000	49.619
964.3	80.3	.0352	43.312	43.750	43.531	=0.000	43.532
964.3	80.5	.0304	36.357	36.719	36.538	=0.000	36.538
964.3	81.2	.0258	30.231	30.451	30.341	=0.000	30.341
964.3	81.7	.0209	23.794	23.909	23.851	=0.000	23.851
964.3	82.2	.0157	17.407	17.437	17.422	=0.000	17.422
964.3	82.8	.0133	14.451	14.521	14.486	=0.000	14.486
964.3	83.2	.0119	11.734	11.722	11.728	=0.000	11.728
964.3	83.7	.0070	7.323	7.271	7.297	=0.000	7.297

TARE DIFF. PRESS = -1.64000E-04 + -1.26930E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 80

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 8E PART F TEST DESCRIPTION CLEAN CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE (TEST SPECIMEN S/N,020) INLET PRESSURE 1,000 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
68.635	976.2	304.6	31.4	88.6	12.4	.0072	.462	.902	2.004	.5251	7.468
68.635	976.2	304.4	31.3	88.3	20.1	.0113	.728	1.434	3.162	.8490	12.076
68.357	972.3	304.3	31.1	88.0	24.6	.0138	.885	1.742	3.840	1.0512	14.951
68.357	972.3	304.1	30.9	87.7	28.5	.0160	1.026	2.020	4.454	1.2411	17.653
68.357	972.3	303.6	30.5	86.8	38.0	.0213	1.366	2.691	5.932	1.7036	24.231
68.357	972.3	303.1	30.0	85.9	46.2	.0257	1.648	3.249	7.156	2.1187	30.135
68.357	972.3	302.5	29.3	84.7	55.1	.0304	1.954	3.847	8.480	2.5854	36.774
68.078	968.3	301.9	28.7	83.7	64.6	.0355	2.280	4.490	9.898	3.0895	43.943
68.078	968.3	301.0	27.9	82.2	73.3	.0400	2.577	5.075	11.188	3.5235	50.116
67.800	964.3	300.5	27.4	81.3	81.0	.0445	2.859	5.630	12.411	4.0257	57.259
67.800	964.3	299.9	26.8	80.2	81.1	.0444	2.859	5.629	12.411	4.0345	57.385
67.800	964.3	299.9	26.7	80.1	75.5	.0392	2.524	4.971	10.958	1.7444	24.811
67.800	964.3	300.0	26.8	80.3	64.1	.0352	2.264	4.458	9.828	3.0606	43.532
67.800	964.3	300.1	27.0	80.5	54.9	.0304	1.954	3.848	8.484	2.5689	36.538
67.800	964.3	300.5	27.3	81.2	46.3	.0258	1.656	3.261	7.189	2.1332	30.341
67.800	964.3	300.7	27.6	81.7	37.3	.0209	1.341	2.641	5.823	1.6769	23.851
67.800	964.3	301.2	27.9	82.2	27.9	.0157	1.004	1.978	4.360	1.2249	17.422
67.800	964.3	301.4	28.2	82.8	23.5	.0133	.850	1.673	3.689	1.0185	14.486
67.800	964.3	301.6	28.4	83.2	19.3	.0109	.699	1.379	3.034	.8246	11.728
67.800	964.3	301.9	28.7	83.7	12.2	.0070	.450	.885	1.952	.5130	7.297
*****	*****	*****	******	******							
68.050	967.9	301.9	28.7	83.7							
.276	3.9	1.4	1.4	2.5	DEVIATIONS						

TABLE 81

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 7/8/76

TEST NUMBER 11A PART A

TEST DESCRIPTION

CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 4.9 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 1000 PSIA (NOMINAL)

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.87	49.9	74.7	.91	47.8	79.1	992.1	76.9	.0438
.78	49.9	74.4	.81	48.3	78.8	992.1	76.6	.0393
.69	49.7	74.6	.71	48.3	78.8	992.1	76.7	.0345
.60	50.1	75.9	.61	48.9	78.9	992.1	76.9	.0301
.50	50.1	75.6	.50	49.3	79.4	992.1	77.5	.0252
.41	49.5	77.2	.40	48.9	79.7	992.1	78.0	.0200
.31	49.9	77.1	.31	49.3	80.4	992.1	78.7	.0155
.27	49.9	77.8	.26	49.3	81.9	992.1	79.3	.0131
.22	49.9	78.7	.21	49.5	81.3	992.1	80.0	.0106
.14	49.5	79.4	.13	49.3	81.7	992.1	80.5	.0067
.14	49.7	81.5	.13	49.3	82.3	992.1	81.4	.0067
.23	49.3	80.4	.22	48.9	82.5	992.1	81.4	.0110
.26	49.9	81.2	.25	49.5	82.5	992.1	81.4	.0130
.32	49.9	80.0	.31	49.3	83.6	992.1	81.3	.0157
.41	49.9	79.2	.41	49.3	82.5	992.1	80.9	.0204
.51	49.7	78.4	.51	48.7	82.1	992.1	80.3	.0251
.60	49.9	77.6	.60	48.7	81.6	992.1	79.6	.0298
.69	49.5	76.8	.70	48.3	81.1	992.1	78.9	.0343
.78	49.5	75.9	.81	47.8	81.2	992.1	78.0	.0388
.87	50.1	75.2	.91	47.9	79.6	992.1	77.4	.0439

TABLE 81

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 7/8/76

TEST NUMBER 11A PART A TEST DESCRIPTION CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 4.9 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 1000 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
992.1	76.9	.0438	56.858	57.449	57.153	-0.000	57.153
992.1	76.6	.0393	49.599	50.189	49.894	-0.000	49.894
992.1	76.7	.0345	43.586	43.253	43.420	-0.000	43.420
992.1	76.9	.0301	37.179	36.922	37.050	-0.000	37.051
992.1	77.5	.0252	30.262	29.973	30.117	-0.000	30.118
992.1	78.0	.0200	23.333	23.039	23.186	-0.000	23.186
992.1	78.7	.0155	17.581	17.320	17.450	-0.000	17.450
992.1	79.3	.0131	14.576	14.407	14.492	-0.000	14.492
992.1	80.0	.0106	11.569	11.384	11.476	-0.000	11.477
992.1	80.5	.0067	7.117	6.996	7.056	-0.000	7.057
992.1	81.4	.0067	6.991	6.996	6.994	-0.000	6.994
992.1	81.4	.0110	11.820	11.840	11.830	-0.000	11.830
992.1	81.4	.0130	14.200	14.236	14.218	-0.000	14.218
992.1	81.3	.0157	17.643	17.663	17.653	-0.000	17.653
992.1	80.9	.0204	23.520	23.497	23.509	-0.000	23.509
992.1	80.3	.0251	29.950	29.858	29.904	-0.000	29.904
992.1	79.6	.0298	36.432	36.290	36.361	-0.000	36.361
992.1	78.9	.0343	42.964	42.792	42.878	-0.000	42.879
992.1	78.0	.0388	48.973	49.557	49.265	-0.000	49.266
992.1	77.4	.0439	56.983	57.449	57.216	-0.000	57.216

TARE DIFF. PRESS = -1.64000E-04 + -1.26930E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE B1

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 7/8/76

TEST NUMBER 11A PART A

TEST DESCRIPTION: CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 4.9 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 1000 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	SCFM	SCFM	GN_2 KG/HR	GN_2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
69.750	992.1	298.1	24.9	76.9	82.8	.0438	2.917	5.744	12.661	4.0183	57.153
69.750	992.1	298.0	24.8	76.6	74.6	.0393	2.621	5.161	11.378	3.5079	49.894
69.750	992.1	298.0	24.8	76.7	65.1	.0345	2.301	4.530	9.988	3.0527	43.420
69.750	992.1	298.1	25.0	76.9	56.4	.0301	2.005	3.948	8.703	2.6049	37.051
69.750	992.1	298.4	25.3	77.5	47.0	.0252	1.677	3.302	7.280	2.1175	30.118
69.750	992.1	298.7	25.5	78.0	37.0	.0200	1.333	2.624	5.786	1.6301	23.186
69.750	992.1	299.1	26.0	78.7	28.6	.0155	1.029	2.027	4.468	1.2269	17.450
69.750	992.1	299.5	26.3	79.3	24.1	.0131	.868	1.710	3.770	1.0189	14.492
69.750	992.1	299.8	26.7	80.0	19.5	.0106	.703	1.385	3.054	.8069	11.477
69.750	992.1	300.1	27.0	80.5	12.1	.0067	.443	.872	1.922	.4961	7.057
69.750	992.1	300.6	27.5	81.4	11.9	.0067	.440	.867	1.910	.4917	6.994
69.750	992.1	300.6	27.5	81.4	20.0	.0110	.724	1.429	3.143	.8317	11.830
69.750	992.1	300.6	27.4	81.4	23.7	.0131	.856	1.688	3.714	.9997	14.218
69.750	992.1	300.6	27.4	81.3	28.9	.0157	1.038	2.045	4.508	1.2411	17.653
69.750	992.1	300.3	27.1	80.9	37.7	.0204	1.350	2.665	5.861	1.6528	23.509
69.750	992.1	300.0	26.8	80.3	46.7	.0251	1.664	3.279	7.223	2.1025	29.904
69.750	992.1	299.6	26.4	79.6	55.6	.0298	1.976	3.891	8.577	2.5564	36.361
69.750	992.1	299.2	26.1	78.9	64.5	.0343	2.276	4.484	9.878	3.0147	42.879
69.750	992.1	298.7	25.6	78.0	73.0	.0388	2.577	5.079	11.188	3.4637	49.266
69.750	992.1	298.4	25.2	77.4	83.0	.0439	2.925	5.760	12.699	4.0227	57.216
*****	*****	*****	******	******							
69.750	992.1	299.3	26.2	79.1							
0	.0	.8	.8	1.5	DEVIATIONS						

TABLE 82
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 7/8/76

TEST NUMBER 11B PART B TEST DESCRIPTION CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 4.9 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 415 PSIA (NOMINAL)

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.88	49.5	74.3	.91	47.6	76.1	418.7	75.2	.1035
.78	49.9	73.8	.81	48.3	75.7	417.4	74.7	.0937
.69	49.9	73.7	.71	48.5	75.5	416.8	74.6	.0827
.60	49.9	73.4	.60	48.7	75.3	416.1	74.3	.0713
.50	50.1	73.4	.50	49.3	75.3	416.1	74.3	.0601
.41	50.1	73.6	.40	49.3	75.3	415.5	74.4	.0484
.31	49.9	73.6	.30	49.5	75.3	415.5	74.4	.0368
.31	49.9	73.6	.30	49.3	75.3	415.5	74.4	.0367
.20	50.1	73.7	.25	49.9	75.3	415.5	74.5	.0311
.22	50.1	73.8	.21	49.9	75.3	415.5	74.5	.0254
.15	49.9	73.9	.14	49.9	75.3	416.1	74.6	.0170
.15	49.5	74.4	.14	49.1	75.7	416.1	75.0	.0168
.22	49.5	74.1	.21	49.3	75.3	416.1	74.7	.0259
.27	49.9	73.9	.26	49.5	75.2	416.1	74.5	.0315
.32	50.1	73.8	.31	49.7	75.2	415.5	74.5	.0379
.41	49.9	73.7	.41	49.3	75.2	415.5	74.4	.0489
.51	50.1	73.6	.50	49.3	75.2	415.5	74.4	.0604
.60	49.9	73.6	.61	48.7	75.2	414.2	74.4	.0719
.69	49.7	73.6	.71	48.3	75.0	413.5	74.3	.0830
.78	49.5	73.7	.81	47.9	75.0	412.9	74.4	.0938

DATE: 7/8/76

TABLE 82
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11B PART B TEST DESCRIPTION ~~CONTAMINATED CONDITION FLOW RATE VERSUS~~ DIFFERENTIAL PRESSURE, TOTAL OF 4.9 mg OF ~~SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN~~ (S/N 020) INLET PRESSURE 4.5 PSIA (NOMINAL)

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.88	49.9	73.6	.91	47.8	74.9	412.9	74.3	.1055

TABLE 82
FLOW RATE VERSUS DIFFERENTIAL PRESSURE
DATE: 7/8/76

TEST NUMBER 11B PART B TEST DESCRIPTION CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 4.9 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 415 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
418.7	75.2	.1035	168.453	168.453	168.453	.002	168.451
417.4	74.7	.0937	143.169	143.169	143.169	.001	143.167
416.8	74.6	.0827	119.465	119.465	119.465	.001	119.464
416.1	74.3	.0713	97.974	97.974	97.974	.001	97.973
416.1	74.3	.0601	77.882	78.695	78.289	.000	78.287
415.5	74.4	.0484	59.520	60.049	59.784	.000	59.783
415.5	74.4	.0368	-0.001	.000	-0.000	.000	-0.002
415.5	74.4	.0367	44.043	43.788	43.916	.000	43.914
415.5	74.5	.0311	36.172	35.894	36.033	.000	36.032
415.5	74.5	.0254	28.969	28.594	28.781	.000	28.780
416.1	74.6	.0170	18.699	18.448	18.574	.000	18.572
416.1	75.0	.0168	18.201	18.162	18.181	.000	18.180
416.1	74.7	.0259	29.404	29.225	29.315	.000	29.313
416.1	74.5	.0315	36.793	36.527	36.660	.000	36.658
415.5	74.5	.0379	45.405	45.058	45.232	.000	45.230
415.5	74.4	.0489	60.021	60.681	60.351	.000	60.349
415.5	74.4	.0604	78.006	78.695	78.351	.000	78.349
414.2	74.4	.0719	98.922	98.922	98.922	.001	98.921
413.5	74.3	.0830	120.414	120.414	120.414	.001	120.412
412.9	74.4	.0938	143.801	143.801	143.801	.001	143.799

TABLE 82

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 7/8/76

TEST NUMBER 118 PART B TEST DESCRIPTION CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 4.9 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 415 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
412.9	74.3	.1055	173.509	173.509	173.509	.002	173.508

TARE DIFF. PRESS = -3.40000E-05 + -4.44000E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 82
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 7/8/76

TEST NUMBER 11B PART B TEST DESCRIPTION CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 4.9 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 415 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PR
PRESSURE		TEMPERATURE			FLOW RATE					
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.468	418.7	297.2	24.0	75.2	82.7	.1035	2.920	5.750	12.676	11.8433	168.451
29.347	417.4	296.9	23.7	74.7	74.7	.0937	2.636	5.190	11.442	10.0657	143.167
29.302	416.8	296.8	23.7	74.6	65.6	.0827	2.324	4.577	10.090	8.3991	119.464
29.256	416.1	296.7	23.5	74.3	56.1	.0713	2.001	3.940	8.686	6.8802	97.973
29.256	416.1	296.7	23.5	74.3	47.3	.0601	1.687	3.322	7.324	5.5041	78.287
29.210	415.5	296.7	23.6	74.4	37.7	.0484	1.358	2.673	5.893	4.2031	59.783
29.210	415.5	296.7	23.6	74.4	28.6	.0367	1.029	2.026	4.468	3.0875	43.914
29.210	415.5	296.8	23.6	74.5	24.2	.0311	.872	1.716	3.784	2.5333	36.032
29.210	415.5	296.8	23.6	74.5	19.7	.0254	.712	1.402	3.090	2.0234	28.780
29.256	416.1	296.8	23.7	74.6	13.0	.0170	.478	.941	2.075	1.3057	18.572
29.256	416.1	297.1	23.9	75.0	12.8	.0168	.472	.930	2.050	1.2782	18.180
29.256	416.1	296.9	23.7	74.7	20.1	.0259	.726	1.430	3.152	2.0609	29.313
29.256	416.1	296.8	23.6	74.5	24.5	.0315	.884	1.740	3.836	2.5773	36.658
29.210	415.5	296.8	23.6	74.5	29.7	.0379	1.063	2.094	4.616	3.1800	45.230
29.210	415.5	296.7	23.6	74.4	38.2	.0489	1.369	2.696	5.944	4.2430	60.349
29.210	415.5	296.7	23.6	74.4	47.4	.0604	1.693	3.333	7.348	5.5085	78.349
29.119	414.2	296.7	23.6	74.4	56.5	.0719	2.009	3.957	8.723	6.9548	98.921
29.073	413.5	296.7	23.5	74.3	65.4	.0830	2.317	4.562	10.057	8.4658	120.421
29.028	412.9	296.7	23.5	74.4	73.9	.0938	2.614	5.148	11.349	10.1101	143.799

TABLE 82
FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 7/8/76

TEST NUMBER 11B PART B

TEST DESCRIPTION: CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 4.9 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 415 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS

PRESSURE		TEMPERATURE			FLOW RATE					NET DIFFERENTIAL PR	
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/ MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PS
29.028	412.9	296.6	23.5	74.3	83.0	.1055	2.939	5.788	12.760	12.1988	173.
*****	*****	*****	******	******							
29.217	415.6	296.8	23.6	74.5							
.064	.9	.1	.1	.2	DEVIATIONS						

TABLE 83

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 7/8/76

TEST NUMBER 11C PART C

TEST DESCRIPTION

CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 11.3 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 1000PSIA (NOMINAL)

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE, (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.86	47.7	75.7	.91	47.6	78.7	1004.0	75.7	.0428
.78	47.9	77.9	.81	48.1	77.7	1004.0	74.8	.0389
.69	48.1	71.7	.71	48.7	77.1	1004.0	74.4	.0343
.60	47.9	71.9	.61	48.7	77.3	1004.0	74.6	.0298
.50	48.1	72.2	.50	49.1	77.3	1000.0	74.8	.0250
.41	48.2	73.0	.41	49.5	77.7	1000.0	75.3	.0204
.31	48.1	73.7	.30	49.5	78.2	1000.0	75.9	.0153
.26	47.9	74.2	.26	49.7	78.4	1000.0	76.3	.0130
.22	47.5	75.	.21	49.1	78.8	1000.0	76.9	.0105
.15	47.5	76.1	.14	49.2	79.6	1004.0	77.9	.0070
.15	48.2	77.8	.14	49.9	80.7	1004.0	79.2	.0070
.23	48.3	77.8	.22	47.9	8 .9	1004.0	79.4	.0107
.26	47.5	78.0	.26	49.1	81.1	1004.0	79.6	.0128
.32	47.9	77.9	.31	49.3	81.1	1004.0	79.5	.0155
.41	47.5	77.6	.40	48.9	81.1	1004.0	79.3	.0199
.50	47.9	76.8	.50	49.1	80.6	1004.0	78.7	.0248
.60	48.1	75.8	.60	49.1	80.0	1000.0	77.9	.0297
.69	47.5	74.7	.71	48.2	79.2	1000.0	76.9	.0342
.78	47.9	74.0	.81	48.3	78.7	1000.0	76.3	.0388
.87	47.7	73.4	.91	47.6	78.2	1000.0	75.7	.0433

TABLE 83

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11C PART C

TEST DESCRIPTION

CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 11.3 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 1000PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1004.0	75.7	.0428	55.940	56.817	56.379	=0.000	56.379
1004.0	74.8	.0389	49.683	50.504	50.094	=0.000	50.094
1004.0	74.4	.0343	43.909	43.599	43.754	=0.000	43.754
1004.0	74.6	.0298	37.274	36.922	37.098	=0.000	37.098
1000.0	74.8	.0250	30.32	29.973	30.146	=0.000	30.147
1000.0	75.3	.0214	23.971	23.611	23.791	=0.000	23.791
1000.0	75.9	.0153	17.425	17.2 6	17.315	=0.000	17.316
1000.0	76.3	.0130	14.520	14.293	14.406	=0.000	14.407
1000.0	76.9	.0115	11.480	11.27	11.379	=0.000	11.379
1004.0	77.9	.0070	7.463	7.338	7.400	=0.000	7.400
1004.0	79.2	.0070	7.463	7.451	7.457	=0.000	7.457
1004.0	79.4	.0117	11.674	11.726	11.700	=0.000	11.700
1004.0	79.6	.0128	14.272	14.293	14.283	=0.000	14.283
1004.0	79.5	.0155	17.611	17.606	17.608	=0.000	17.608
1004.0	79.3	.0199	23.292	23.268	23.280	=0.000	23.280
1004.0	78.7	.0248	29.951	29.858	29.904	=0.000	29.905
1000.0	77.9	.0297	36.844	36.750	36.797	=0.000	36.797
1000.0	76.9	.0342	43.541	43.426	43.484	=0.000	43.484
1000.0	76.3	.0388	49.433	5 .189	49.811	=0.000	49.811
1000.0	75.7	.0433	56.942	57.764	57.353	=0.000	57.353

TARE DIFF. PRESS = -1.64000E-04 + -1.26930E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 83

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 7/8/76

TEST NUMBER 11C PART C

TEST DESCRIPTION: CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 11.3 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 1000 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS									NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE					
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
70.586	1004.0	297.4	24.3	75.7	82.1	.426	2.892	5.694	12.554	3.9638	56.379
70.586	1004.0	296.9	23.8	74.8	74.7	.389	2.633	5.189	11.432	3.5219	50.094
70.586	1004.0	296.7	23.6	74.4	65.7	.343	2.323	4.574	10.083	3.0762	43.754
70.586	1004.0	296.8	23.7	74.6	56.6	.298	2.015	3.969	8.745	2.6083	37.098
70.307	1000.0	296.9	23.8	74.8	47.2	.255	1.685	3.317	7.317	2.1195	30.147
70.307	1000.0	297.2	24.1	75.3	38.3	.0204	1.375	2.707	5.968	1.6727	23.791
70.307	1000.0	297.6	24.4	75.9	28.7	.0153	1.030	2.028	4.472	1.2174	17.316
70.307	1000.0	297.8	24.6	76.3	24.2	.013	.871	1.715	3.781	1.0129	14.407
70.307	1000.0	298.1	24.9	76.9	19.4	.0105	.702	1.382	3.048	.8000	11.379
70.586	1004.0	298.6	25.5	77.9	12.8	.007	.471	.927	2.043	.5203	7.400
70.586	1004.0	299.4	26.2	79.2	12.9	.007	.473	.931	2.053	.5243	7.457
70.586	1004.0	299.5	26.3	79.4	19.8	.0107	.715	1.407	3.106	.8226	11.700
70.586	1004.0	299.6	26.4	79.6	23.8	.128	.858	1.688	3.723	1.0042	14.283
70.586	1004.0	299.6	26.4	79.5	28.8	.0155	1.039	2.045	4.510	1.2380	17.608
70.586	1004.0	299.4	26.3	79.3	37.2	.199	1.335	2.627	5.796	1.6367	23.280
70.586	1004.0	299.1	25.9	78.7	46.7	.0248	1.664	3.274	7.224	2.1025	29.905
70.307	1000.0	298.7	25.5	77.9	56.2	.297	1.994	3.925	8.654	2.5871	36.797
70.307	1000.0	298.1	25.0	76.9	65.0	.1347	2.298	4.525	9.976	3.0572	43.484
70.307	1000.0	297.8	24.6	76.3	74.1	.0388	2.611	5.141	11.334	3.5021	49.811
70.307	1000.0	297.4	24.3	75.7	82.6	.0433	2.917	5.744	12.664	4.0323	57.353
*****	*****	*****	******	******						
70.461	1002.6	298.1	25.0	77.0						
.138	2.0	.9	.9	1.6	DEVIATIONS					

TABLE 84

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 110 \ PART 0

TEST DESCRIPTION

CONTAMINATED CONDITION - FLOW RATE versus DIFFERENTIAL PRESSURE. TOTAL OF 11.3 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 415 PSIA (NOMINAL)

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE, (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.88	49.5	80.9	.92	47.4	82.2	412.9	81.5	.1051
.78	50.4	80.9	.81	48.7	82.2	412.2	81.6	.0957
.69	50.2	80.9	.70	48.9	82.3	411.6	81.6	.0835
.60	50.1	80.9	.61	49.1	82.4	410.9	81.7	.0730
.51	49.9	80.9	.51	48.9	82.5	410.9	81.7	.0610
.41	50.4	80.9	.41	49.9	82.5	410.9	81.7	.0499
.32	49.9	81.2	.31	49.5	82.6	411.9	81.9	.0379
.27	49.9	81.4	.26	49.3	82.8	411.6	82.1	.0315
.22	49.9	81.8	.21	49.7	83.0	411.6	82.4	.0258
.15	50.1	82.1	.13	49.9	83.3	411.6	82.7	.0170
.15	49.5	81.4	.13	49.3	83.5	412.2	82.9	.0168
.21	50.2	82.5	.20	49.9	83.7	412.2	83.1	.0254
.27	49.9	82.2	.26	49.5	83.5	411.6	82.8	.0319
.32	49.5	81.9	.31	48.9	83.3	411.6	82.6	.0374
.41	49.9	81.5	.40	49.1	83.2	410.9	82.3	.0492
.51	49.9	81.3	.50	49.1	83.0	410.9	82.2	.0609
.60	49.7	81.1	.60	48.5	82.8	410.3	82.0	.0721
.69	50.2	81.1	.71	48.7	82.7	409.6	81.9	.0847
.78	50.2	81.1	.81	48.5	82.5	418.7	81.8	.0937
.87	49.9	81.1	.91	47.8	82.4	418.1	81.8	.1041

TABLE 84

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 7-8-76

TEST NUMBER 11D PART D

TEST DESCRIPTION: CONTAMINATED CONDITION - FLOW RATE versus DIFFERENTIAL PRESSURE. TOTAL OF 11.3 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 415 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
412.7	81.5	.1051	183.709	183.709	183.709	.002	183.708
412.6	81.6	.0957	155.616	155.616	155.616	.001	155.615
411.9	81.6	.0835	127.208	127.208	127.208	.001	127.206
410.7	81.7	.0730	105.428	105.428	105.428	.001	105.426
410.7	81.7	.0610	82.199	83.016	82.608	.001	82.606
410.7	81.7	.0499	63.533	64.393	63.963	.000	63.961
410.7	81.9	.0379	46.785	46.597	46.691	.000	46.689
411.9	82.1	.0315	38.044	37.842	37.943	.000	37.942
411.9	82.4	.0258	30.148	29.915	30.032	.000	30.030
411.9	82.7	.0170	19.111	18.863	19.002	.000	19.000
412.6	82.9	.0168	18.707	18.749	18.728	.000	18.726
412.6	83.1	.0254	29.654	29.456	29.555	.000	29.554
411.9	82.8	.0319	38.414	38.303	38.358	.000	38.357
411.9	82.6	.0374	46.232	46.020	46.126	.000	46.124
410.7	82.3	.0492	62.657	63.446	63.052	.000	63.050
410.7	82.2	.0609	82.446	83.332	82.889	.000	82.887
410.9	82.0	.0721	103.849	103.849	103.849	.001	103.848
409.9	81.9	.0847	129.733	129.733	129.733	.001	129.731
418.1	81.8	.0937	149.934	149.934	149.934	.001	149.933
418.1	81.8	.1041	178.659	178.659	178.659	.002	178.657

TARE DIFF. PRESS = -3.40000E-05 + -4.44000E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 84

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 110 PART D

TEST DESCRIPTION: CONTAMINATED CONDITION - FLOW RATE versus DIFFERENTIAL PRESSURE. TOTAL OF 11.3 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 415 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE		TEMPERATURE			FLOW RATE					NET DIFFERENTIAL PRESS	
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN_2 KG/HR	GN_2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.028	412.7	300.7	27.5	81.5	81.7	.1051	2.890	5.690	12.544	12.9159	183.70
28.982	412.4	300.7	27.5	81.6	74.3	.0957	2.626	5.171	11.400	10.9408	155.61
28.937	411.9	300.7	27.6	81.6	64.6	.0835	2.288	4.504	9.930	8.9435	127.20
28.891	410.7	300.7	27.6	81.7	56.1	.0736	1.996	3.929	8.663	7.4122	105.42
28.891	410.7	300.8	27.6	81.7	46.6	.0618	1.668	3.284	7.239	5.8078	82.60
28.891	410.7	300.8	27.6	81.7	38.1	.0499	1.366	2.689	5.928	4.4969	63.96
28.891	410.7	300.9	27.7	81.9	28.8	.0379	1.036	2.039	4.496	3.2826	46.68
28.937	411.0	301.0	27.8	82.1	23.9	.0315	.864	1.700	3.749	2.6676	37.94
28.937	411.9	301.2	28.0	82.4	19.6	.0258	.707	1.392	3.068	2.1113	30.03
28.937	411.9	301.3	28.2	82.7	12.7	.0176	.466	.917	2.022	1.3359	19.00
28.982	412.4	301.5	28.3	82.9	12.5	.0168	.460	.905	1.998	1.3166	18.72
28.982	412.4	301.5	28.4	83.1	19.2	.0254	.696	1.370	3.021	2.0778	29.55
28.937	411.9	301.4	28.2	82.8	24.2	.319	.872	1.718	3.787	2.6967	38.35
28.937	411.9	301.3	28.1	82.6	28.5	.0374	1.022	2.014	4.436	3.2429	46.12
28.891	410.7	301.1	28.0	82.3	37.3	.0495	1.343	2.645	5.830	4.4329	63.05
28.891	410.7	301.0	27.9	82.2	46.6	.0609	1.664	3.278	7.223	5.8276	82.88
28.845	410.3	300.9	27.8	82.0	55.1	.0721	1.967	3.876	8.537	7.3012	103.84
28.800	409.9	300.9	27.7	81.9	65.0	.0847	2.308	4.544	10.018	9.1210	129.73
29.438	418.7	300.8	27.6	81.8	73.8	.0937	2.612	5.143	11.339	10.5413	149.93
29.393 *****	418.1 *****	300.8 *****	27.6 ******	81.8 ******	81.9	.1041	2.897	5.704	12.575	12.5609	178.65
28.971	412.1	301.0	27.8	82.1							
.098	1.4	.2	.2	.4	DEVIATIONS						

TABLE 85

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11E PART E TEST DESCRIPTION

CONTAMINATED CONDITION - FLOW RATE versus DIFFERENTIAL PRESSURE. TOTAL OF 16.7 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 1000 PSIA (NOMINAL).

FLOWMETER CONDITIONS

FLOWMETER ONE			FLOWMETER TWO			TEST SPECIMEN INLET CONDITIONS		
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE, (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.86	50.1	67.3	.91	47.9	75.8	992.1	70.0	.0431
.78	50.4	66.8	.81	48.5	73.2	992.1	69.5	.0397
.68	50.2	66.6	.70	48.9	71.8	992.1	69.2	.0344
.60	50.4	66.8	.60	49.3	71.8	992.1	69.3	.0302
.50	49.5	67.2	.51	48.7	71.9	992.1	69.6	.0249
.41	49.9	67.8	.40	49.3	72.2	992.1	70.0	.0204
.31	49.1	68.7	.30	48.7	72.8	992.1	70.7	.0151
.27	50.2	69.5	.26	49.9	73.2	992.1	71.3	.0133
.22	50.2	70.2	.21	49.9	73.5	992.1	71.8	.0107
.15	49.9	70.9	.14	49.9	74.	992.1	72.4	.0072
.15	49.7	70.9	.14	49.5	74.7	992.1	73.4	.0072
.22	49.5	72.2	.21	49.1	74.9	992.1	73.5	.0107
.27	49.5	72.1	.26	49.3	75.	992.1	73.6	.0130
.32	50.2	71.9	.31	49.9	75.1	992.1	73.5	.0157
.41	50.1	71.4	.41	49.5	75.0	992.1	73.2	.0204
.51	49.5	71.7	.51	48.5	74.7	992.1	72.7	.0250
.60	49.5	69.7	.60	48.3	74.1	992.1	71.9	.0296
.69	49.9	69.0	.71	48.5	73.6	988.1	71.3	.0348
.78	49.5	68.2	.81	47.6	73.1	988.1	70.6	.0390
.87	49.5	67.5	.91	47.4	72.3	988.1	69.9	.0436

TABLE 85

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11E PART E

TEST DESCRIPTION CONTAMINATED CONDITION - FLOW RATE versus DIFFERENTIAL PRESSURE. TOTAL OF 16 7 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 1000 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
992.1	70.0	.0437	58.641	59.417	59.029	-0.000	59.029
992.1	69.5	.0397	51.874	52.464	52.169	-0.000	52.169
992.1	69.2	.0344	44.799	44.528	44.659	-0.000	44.659
992.1	69.3	.0312	38.372	38.063	38.217	-0.000	38.217
992.1	69.6	.0249	30.571	30.240	30.405	-0.000	30.406
992.1	70.0	.0204	24.244	23.927	24.086	-0.000	24.086
992.1	70.7	.0151	17.409	17.170	17.290	-0.000	17.290
992.1	71.3	.0133	15.146	14.826	14.939	-0.000	14.936
992.1	71.8	.0107	11.933	11.741	11.837	-0.000	11.837
992.1	72.4	.0072	7.821	7.632	7.726	-0.000	7.727
992.1	73.4	.0072	7.696	7.632	7.664	-0.000	7.664
992.1	73.6	.0107	11.684	11.683	11.684	-0.000	11.684
992.1	73.6	.0130	14.672	14.654	14.663	-0.000	14.663
992.1	73.5	.0157	17.969	17.914	17.941	-0.000	17.942
992.1	73.2	.0206	24.306	24.214	24.260	-0.000	24.260
992.1	72.7	.0250	30.694	30.527	30.611	-0.000	30.611
992.1	71.9	.0296	37.444	37.199	37.321	-0.000	37.322
988.1	71.3	.0348	45.169	44.866	45.018	-0.000	45.018
988.1	70.6	.0390	50.621	51.199	50.910	-0.000	50.910
988.1	69.9	.0436	58.391	59.417	58.904	-0.000	58.904

TARE DIFF. PRESS = -1.64000E-04 + -1.24930E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 85

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11E PART F TEST DESCRIPTION CONTAMINATED CONDITION - FLOW RATE versus DIFFERENTIAL PRESSURE. TOTAL OF 16 7 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 1000 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	SCFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
69.750	992.1	294.3	21.1	70.0	83.9	.0437	2.949	5.805	12.800	4.1502	59.029
69.750	992.1	294.0	20.8	69.5	75.9	.0397	2.680	5.275	11.632	3.6678	52.169
69.750	992.1	293.8	20.7	69.2	65.8	.0344	2.325	4.579	10.095	3.1399	44.659
69.750	992.1	293.9	20.7	69.3	57.5	.0300	2.041	4.018	8.859	2.6869	38.217
69.750	992.1	294.0	20.9	69.6	47.1	.0249	1.680	3.308	7.293	2.1377	30.406
69.750	992.1	294.3	21.1	70.0	38.3	.0204	1.375	2.707	5.969	1.6934	24.086
69.750	992.1	294.7	21.5	70.7	28.3	.0151	1.017	2.002	4.414	1.2156	17.290
69.750	992.1	295.1	21.8	71.3	24.9	.0133	.896	1.764	3.889	1.0501	14.936
69.750	992.1	295.3	22.1	71.8	19.9	.0107	.723	1.423	3.137	.8922	11.837
69.750	992.1	295.6	22.5	72.4	13.2	.0072	.486	.956	2.109	.5432	7.727
69.750	992.1	296.2	23.1	73.4	13.1	.0072	.482	.949	2.093	.5389	7.664
69.750	992.1	296.2	23.1	73.5	19.7	.0107	.715	1.408	3.104	.8215	11.684
69.750	992.1	296.2	23.1	73.6	24.3	.0130	.875	1.722	3.796	1.0309	14.663
69.750	992.1	296.2	23.0	73.5	29.3	.0157	1.055	2.078	4.580	1.2614	17.942
69.750	992.1	296.0	22.9	73.2	38.6	.0206	1.381	2.717	5.993	1.7057	24.260
69.750	992.1	295.8	22.6	72.7	47.2	.0250	1.681	3.310	7.298	2.1522	30.611
69.750	992.1	295.3	22.2	71.9	56.0	.0296	1.989	3.918	8.634	2.6240	37.322
69.471	988.1	295.0	21.8	71.3	66.0	.0348	2.333	4.594	10.128	3.1651	45.018
69.471	988.1	294.6	21.4	70.6	74.0	.0390	2.617	5.153	11.360	3.5794	50.910
69.471	988.1	294.2	21.1	69.9	83.2	.0436	2.932	5.773	12.728	4.1414	58.904
*****	*****	*****	******	******							
69.708	991.9	295.0	21.9	71.4							
.071	1.0	.8	.8	1.4	DEVIATIONS						

TABLE 86

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11F PART F TEST DESCRIPTION

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 16.7 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 415 PSIA (NOMINAL).

FLOWMETER ONE			FLOWMETER TWO			TEST SPECIMEN INLET CONDITIONS		
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.88	49.5	77.4	.91	47.5	78.9	412.0	78.1	.1050
.79	50.4	77.5	.81	48.7	79.	411.3	78.2	.0959
.70	50.1	77.5	.71	48.5	79.1	410.7	78.3	.0842
.61	49.9	77.7	.61	48.7	79.3	410.7	78.5	.0734
.51	50.2	77.7	.51	49.2	79.4	410.7	78.6	.0615
.41	50.1	77.9	.40	49.4	79.6	410.7	78.8	.0496
.31	50.1	78.2	.30	49.8	79.7	410.7	79.0	.0375
.26	50.1	78.4	.25	49.8	79.9	410.7	79.1	.0313
.21	50.4	78.6	.20	50.0	80.2	410.7	79.4	.0255
.15	50.1	78.9	.13	49.8	80.2	411.3	79.6	.0170
.15	49.1	79.4	.13	48.8	80.7	412.0	80.1	.0166
.22	50.1	79.4	.21	49.8	80.8	412.0	80.1	.0258
.27	49.9	79.4	.26	49.4	80.8	411.3	80.1	.0321
.32	49.7	79.2	.31	49.2	80.8	411.3	80.0	.0380
.42	50.1	79.1	.41	49.-	80.7	411.3	79.9	.0496
.51	50.1	79.0	.51	49.0	80.7	410.7	79.9	.0617
.60	50.4	78.9	.60	49.2	80.7	410.0	79.8	.0730
.70	49.5	79.-	.71	48.-	80.7	410.0	79.9	.0838
.79	50.2	79.1	.81	48.5	80.7	410.0	79.9	.0959
.88	50.2	79.4	.91	48.3	80.8	419.1	80.1	.1052

TABLE 86

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11F PART F

TEST DESCRIPTION CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 16.7 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 415 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
412.0	78.1	.1052	189.496	189.496	189.496	.002	189.495
411.9	78.2	.0959	160.456	160.456	160.456	.001	160.455
410.9	78.3	.0842	132.048	132.048	132.048	.001	132.046
410.9	78.5	.0734	108.374	108.374	108.374	.001	108.372
410.9	78.6	.0615	84.699	85.115	84.707	.001	84.706
410.9	78.8	.0496	63.862	64.498	64.180	.000	64.178
410.7	79.0	.0375	46.595	46.298	46.447	.000	46.445
410.9	79.1	.0313	37.800	37.544	37.672	.000	37.670
410.9	79.4	.0255	29.74	29.435	29.588	.000	29.586
411.3	79.6	.0171	19.174	18.829	19.001	.000	19.000
412.0	80.1	.0166	18.552	18.543	18.547	.000	18.546
412.0	80.1	.0258	30.298	30.125	30.211	.000	30.210
411.9	80.1	.0391	38.915	38.753	38.834	.000	38.832
411.3	80.0	.0380	47.512	47.232	47.372	.000	47.370
411.9	79.9	.0496	64.112	64.814	64.463	.000	64.461
410.7	79.9	.0617	85.138	85.647	85.392	.001	85.391
410.0	79.8	.0730	107.427	107.407	107.427	.001	107.425
410.0	79.9	.0838	131.101	131.101	131.101	.001	131.099
410.0	79.9	.0959	161.403	161.403	161.403	.001	161.402
419.1	80.1	.1052	188.234	188.234	188.234	.002	188.232

TARE DIFF. PRESS = -3.40000E-05 + -4.44006E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 86

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11F PART F

TEST DESCRIPTION: CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 16 7 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 415 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE		TEMPERATURE			FLOW RATE				NET DIFFERENTIAL PRESS	
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
28.963	412.[illegible]	298.8	25.6	78.1	80.0	.105[illegible]	2.899	5.[illegible]07	12.586	13.3228	189.495
28.918	411.[illegible]	298.8	25.7	78.2	74.5	.0959	2.642	5.20[illegible]	11.470	11.2811	160.455
28.872	41[illegible]	298.9	25.7	78.3	65.0	.0842	2.317	4.56[illegible]	10.057	9.2838	132.046
28.872	410.[illegible]	299.0	25.8	78.5	56.5	.0734	2.019	3.975	8.762	7.6193	108.372
28.872	410.[illegible]	299.0	25.9	78.6	47.1	.0615	1.690	3.328	7.337	5.9554	84.706
28.872	410.[illegible]	299.1	26.	78.8	37.8	.0496	1.362	2.68[illegible]	5.914	4.5122	64.178
28.872	410.[illegible]	299.3	26.1	79.0	28.5	.0375	1.030	2.02[illegible]	4.473	3.2654	46.445
28.872	410.[illegible]	299.3	26.2	79.1	23.7	.0313	.861	1.69[illegible]	3.736	2.6485	37.670
28.872	410.[illegible]	299.5	26.3	79.4	19.0	.0255	.700	1.37[illegible]	3.041	2.0801	29.586
28.918	411.[illegible]	299.6	26.4	79.6	12.7	.0170	.469	.92[illegible]	2.034	1.3358	19.000
28.963	412.[illegible]	299.9	26.7	80.1	12.3	.0166	.456	.898	1.981	1.3039	18.546
28.963	412.[illegible]	299.9	26.7	80.1	19.6	.0268	.710	1.39[illegible]	3.081	2.1240	30.210
28.918	411.[illegible]	299.9	26.7	80.1	24.4	.0321	.882	1.73[illegible]	3.830	2.7302	38.832
28.918	411.[illegible]	299.8	26.7	80.0	28.9	.0380	1.044	2.05[illegible]	4.531	3.3305	47.370
28.918	411.[illegible]	299.8	26.6	79.9	37.8	.0496	1.363	2.68[illegible]	5.915	4.5321	64.461
28.872	410.[illegible]	299.8	26.6	79.9	47.2	.0617	1.691	3.33[illegible]	7.341	6.0036	85.391
28.826	410.[illegible]	299.7	26.6	79.8	56.0	.0731	1.999	3.93[illegible]	8.679	7.5527	107.425
28.826	410.[illegible]	299.8	26.6	79.9	64.8	.0838	2.295	4.52[illegible]	9.964	9.2172	131.099
28.826	410.	299.8	26.6	79.9	74.1	.959	2.627	5.17[illegible]	11.403	11.3477	161.402
29.466 *****	419.1 *****	299.9 *****	26.7 ******	80.1 ******	80.2	.1052	2.943	5.794	12.774	13.2340	188.232
28.920	411.[illegible]	299.5	26.3	79.4							
.068	1.[illegible]	.4	.4	.6	DEVIATIONS						

TABLE 87

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 116 PART G

TEST DESCRIPTION

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 24.1 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 1000 PSIA (NOMINAL).

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.86	49.7	75.8	.91	47.6	81.5	1004.0	78.7	.0429
.78	49.9	75.4	.81	48.1	81.[illegible]	1004.0	78.2	.0388
.69	49.5	75.[illegible]	.71	47.9	80.6	1004.0	77.9	.0339
.60	49.5	75.9	.60	48.3	80.6	1000.0	78.0	.0295
.51	50.1	75.6	.51	49.1	80.6	1000.0	78.1	.0251
.41	49.5	76.1	.41	48.9	80.8	1000.0	78.5	.0202
.31	49.7	76.7	.30	49.3	81.0	1000.0	78.9	.0153
.27	49.5	77.3	.26	49.1	81.3	1000.0	79.3	.0130
.22	49.7	78.0	.21	49.3	81.7	1000.0	79.8	.0107
.15	49.5	78.6	.13	49.3	82.[illegible]	1000.0	80.3	.0070
.15	49.1	79.9	.13	48.7	83.6	1000.0	81.2	.0069
.23	49.1	79.8	.22	48.7	82.6	1000.0	81.2	.0108
.27	49.9	79.6	.26	49.7	82.6	1000.0	81.1	.0133
.32	49.7	79.4	.31	49.3	82.6	1000.0	81.0	.0156
.41	49.5	78.8	.41	48.7	82.4	1000.0	80.6	.0201
.50	49.1	78.1	.50	48.3	82.2	1000.0	80.1	.0246
.60	49.7	77.2	.60	48.5	81.7	1000.0	79.5	.0295
.69	49.7	76.0	.71	48.3	80.8	1000.0	78.4	.0343
.78	50.2	74.9	.81	48.5	79.8	996.0	77.4	.0394
.87	49.7	74.0	.91	47.6	78.9	996.0	76.5	.0435

TABLE 87

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11G PART G

TEST DESCRIPTION: CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 24.1 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INPUT PRESSURE 1000 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1004.0	78.7	.0429	59.694	60.214	59.954	-0.000	59.954
1004.0	78.2	.0388	52.559	53.279	52.919	-0.000	52.919
1004.0	77.9	.0339	45.607	45.329	45.468	-0.000	45.468
1000.0	78.0	.0295	38.509	38.254	38.382	-0.000	38.382
1000.0	78.1	.0251	31.777	31.482	31.629	-0.000	31.627
1000.0	78.5	.0202	24.524	24.211	24.367	-0.000	24.367
1000.0	78.9	.0153	17.947	17.698	17.822	-0.000	17.822
1000.0	79.3	.0130	14.844	14.617	14.729	-0.000	14.729
1000.0	79.8	.0107	12.167	11.939	12.053	-0.000	12.053
1000.0	80.3	.0070	7.562	7.442	7.502	-0.000	7.502
1000.0	81.2	.0069	7.438	7.385	7.411	-0.000	7.412
1000.0	81.2	.0108	12.10	12.110	12.107	-0.000	12.108
1000.0	81.1	.0133	15.151	15.188	15.169	-0.000	15.170
1000.0	81.0	.0156	18.195	18.154	18.175	-0.000	18.175
1000.0	80.6	.0201	24.276	24.211	24.243	-0.000	24.243
1000.0	80.1	.0246	30.842	30.737	30.790	-0.000	30.790
1000.0	79.5	.0295	38.448	38.254	38.351	-0.000	38.351
1000.0	78.4	.0343	46.038	45.789	45.914	-0.000	45.914
996.0	77.4	.0394	53.185	54.224	53.705	-0.000	53.705
996.0	76.5	.0435	60.570	61.475	61.023	-0.000	61.023

TARE DIFF. PRESS = -1.64000E-04 + -1.26930E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 87

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11G PART G

TEST DESCRIPTION: CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 24.1 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INPUT PRESSURE 1000 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE		TEMPERATURE			FLOW RATE					NET DIFFERENTIAL PRESS	
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
70.586	1004.0	299.1	25.9	78.7	87.9	.0429	2.882	5.674	12.509	4.2152	59.954
70.586	1004.0	298.8	25.7	78.2	74.0	.0388	2.611	5.141	11.334	3.7206	52.919
70.586	1004.0	298.7	25.5	77.9	64.4	.0339	2.282	4.494	9.907	3.1967	45.468
70.307	1000.0	298.7	25.5	78.0	55.5	.0295	1.975	3.888	8.574	2.6985	38.382
70.307	1000.0	298.8	25.6	78.1	47.1	.0251	1.681	3.309	7.295	2.2236	31.627
70.307	1000.0	299.0	25.8	78.5	37.6	.0202	1.351	2.661	5.866	1.7132	24.367
70.307	1000.0	299.2	26.0	78.9	28.4	.0153	1.024	2.017	4.446	1.2530	17.822
70.307	1000.0	299.4	26.3	79.3	24.0	.0130	.866	1.705	3.761	1.0356	14.729
70.307	1000.0	299.7	26.6	79.8	19.7	.0107	.718	1.413	3.116	.8474	12.053
70.307	1000.0	300.0	26.8	80.3	12.6	.0070	.466	.917	2.021	.5275	7.502
70.307	1000.0	300.5	27.4	81.2	12.4	.0069	.458	.901	1.986	.5211	7.412
70.307	1000.0	300.5	27.3	81.2	19.9	.0108	.721	1.421	3.132	.8512	12.108
70.307	1000.0	300.4	27.3	81.1	24.5	.0133	.883	1.737	3.833	1.0665	15.170
70.307	1000.0	300.4	27.2	81.0	28.8	.0156	1.037	2.044	4.501	1.2778	18.175
70.307	1000.0	300.1	27.0	80.6	37.3	.0201	1.341	2.640	5.820	1.7045	24.243
70.307	1000.0	299.9	26.7	80.1	46.0	.0246	1.640	3.232	7.119	2.1547	30.790
70.307	1000.0	299.5	26.4	79.5	55.6	.0295	1.974	3.888	8.571	2.6964	38.351
70.307	1000.0	298.9	25.8	78.4	65.0	.0343	2.299	4.527	9.981	3.2281	45.914
70.029	996.0	298.4	25.2	77.4	74.7	.0394	2.635	5.189	11.440	3.7758	53.705
70.029	996.0	297.9	24.7	76.5	82.5	.0435	2.910	5.730	12.634	4.2903	61.023
*****	*****	*****	******	******							
70.321	1000.6	299.4	26.2	79.2							
.079	1.1	.7	.7	1.2	DEVIATIONS						

TABLE 88

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11H PART H TEST DESCRIPTION

CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 24.1 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 415 PSIA (NOMINAL)

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.88	49.7	79.9	.92	47.5	79.4	418.1	78.6	.1045
.78	50.4	79.8	.81	48.7	79.3	417.4	78.5	.0941
.70	50.4	79.7	.71	49.0	79.3	416.8	78.5	.0836
.60	50.1	79.6	.60	49.0	79.4	416.8	78.5	.0718
.51	49.5	79.8	.51	48.7	79.6	416.8	78.7	.0597
.41	49.9	78.0	.40	49.2	79.8	416.8	78.9	.0486
.32	49.7	78.3	.31	49.2	80.0	416.8	79.2	.0369
.27	50.1	79.5	.26	49.8	80.1	416.8	79.3	.0316
.22	50.4	78.8	.21	50.0	80.3	416.8	79.6	.0256
.15	49.5	79.1	.14	49.0	80.6	416.8	79.8	.0171
.15	49.1	79.7	.14	48.8	81.0	417.4	80.3	.0169
.22	49.9	79.7	.21	49.4	81.1	417.4	80.4	.0251
.26	49.9	79.8	.25	49.4	81.2	417.4	80.5	.0305
.32	49.7	79.6	.31	49.2	81.0	417.4	80.4	.0368
.42	49.7	79.5	.41	49.0	81.1	417.4	80.3	.0487
.51	49.5	79.2	.51	48.7	81.1	416.8	80.1	.0597
.60	50.2	79.2	.60	49.0	80.9	416.8	80.0	.0719
.69	49.7	79.2	.70	48.3	80.9	415.5	80.0	.0823
.79	49.9	79.2	.81	48.3	81.8	415.5	80.0	.0942
.88	50.2	79.2	.91	48.3	80.7	415.5	80.0	.1062

TABLE 88

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11H PART A TEST DESCRIPTION CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 24.1 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 415 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
418.1	78.6	.1045	198.019	198.019	198.019	.002	198.017
417.7	78.5	.0941	163.928	163.928	163.928	.001	163.927
416.8	78.5	.0836	135.835	135.835	135.835	.001	135.834
416.8	78.5	.0718	109.636	109.636	109.636	.001	109.635
416.8	78.7	.0597	84.458	85. 15	84.737	.000	84.735
416.8	78.9	.0486	64.576	65.445	65.010	.000	65.009
416.8	79.2	.0369	47.327	46.827	47.077	.000	47.075
416.8	79.3	.0316	39.162	38.648	38.905	.000	38.903
416.8	79.6	.0256	30.608	30.317	30.463	.000	30.461
416.8	79.8	.0171	19.453	19.176	19.314	.000	19.313
417.4	80.3	.0169	19.174	19.192	19.133	.000	19.131
417.4	80.4	.0251	29.802	29.743	29.772	.000	29.771
417.4	80.5	.0305	37.490	37.389	37.439	.000	37.435
417.4	80.4	.0368	46.894	46.654	46.774	.000	46.773
417.4	80.3	.0487	64.326	65.129	64.727	.000	64.726
416.8	80.1	.0597	84.335	85.331	84.833	.000	84.831
416.1	80.0	.0719	109.636	109.636	109.636	.001	109.635
415.5	80.0	.0823	133.626	133.626	133.626	.001	133.624
415.5	80.0	.0942	164.244	164.244	164.244	.001	164.242
415.5	80.0	.1062	203.700	203.700	203.700	.002	203.699

TARE DIFF. PRESS = -3.40000E-05 + -4.44000E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 88

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 7/8/76

TEST NUMBER 11H PART H

TEST DESCRIPTION: CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 24.1 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 415 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.393	418.1	299.1	25.9	78.6	82.6	.1145	2.923	5.759	12.688	13.9220	198.017
29.347	417.4	299.0	25.8	78.5	74.3	.0941	2.631	5.180	11.419	11.5252	163.927
29.302	416.8	299.0	25.8	78.5	65.6	.0836	2.334	4.596	10.132	9.5501	135.834
29.302	416.8	299.0	25.8	78.5	56.2	.0718	2.003	3.944	8.696	7.7081	109.635
29.302	416.8	299.1	25.9	78.7	46.6	.0597	1.666	3.281	7.233	5.9575	84.735
29.302	416.8	299.2	26.1	78.9	37.7	.0486	1.356	2.670	5.887	4.5706	65.009
29.302	416.8	299.4	26.2	79.2	28.5	.0369	1.028	2.024	4.463	3.3097	47.075
29.302	416.8	299.5	26.3	79.3	24.3	.0316	.880	1.736	3.819	2.7352	38.903
29.302	416.8	299.6	26.4	79.6	19.6	.0256	.712	1.402	3.093	2.1416	30.461
29.302	416.8	299.7	26.6	79.8	12.8	.171	.476	.937	2.066	1.3578	19.313
29.347	417.4	300.0	26.8	80.3	12.8	.0169	.470	.929	2.040	1.3451	19.131
29.347	417.4	300.1	26.9	80.4	19.3	.0251	.699	1.377	3.035	2.0931	29.771
29.347	417.4	300.1	26.9	80.5	23.4	.0305	.850	1.674	3.691	2.6319	37.435
29.347	417.4	300.0	26.9	80.4	28.4	.0368	1.026	2.020	4.452	3.2884	46.773
29.347	417.4	300.0	26.8	80.3	37.7	.0487	1.356	2.670	5.886	4.5507	64.726
29.302	416.8	299.9	26.7	80.1	46.5	.0597	1.662	3.272	7.214	5.9642	84.831
29.256	416.1	299.9	26.7	80.1	55.9	.0719	1.998	3.935	8.674	7.7081	109.635
29.210	415.5	299.9	26.7	80.0	64.3	.0829	2.283	4.496	9.912	9.3947	133.624
29.210	415.5	299.8	26.7	80.0	73.8	.0942	2.613	5.144	11.341	11.5474	164.242
29.210	415.5	299.8	26.7	80.0	83.3	.1062	2.947	5.802	12.794	14.3215	203.699
*****	*****	*****	******	******							
29.304	416.8	299.6	26.4	79.6							
.035	.5	.4	.4	.6	DEVIATIONS						

TABLE 89

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 7/8/76

TEST NUMBER 111 PART I TEST DESCRIPTION

CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 38.9 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 1000 PSIA (NOMINAL)

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.87	49.1	77.5	.91	46.9	83.1	1000.0	80.3	.0426
.78	50.4	76.4	.81	48.7	81.9	996.3	79.2	.0397
.69	50.4	76.3	.71	49.0	81.6	996.3	78.9	.0349
.60	50.2	76.6	.61	49.0	81.5	996.0	79.1	.0301
.51	49.9	77.2	.51	49.1	81.8	996.1	79.5	.0251
.41	49.5	77.8	.40	48.8	82.2	996.0	80.0	.0201
.32	49.9	78.5	.31	49.4	82.6	996.2	80.6	.0155
.27	50.2	79.3	.26	49.8	83.9	996.1	81.1	.0133
.21	49.5	79.9	.20	49.0	83.2	996.0	81.6	.0104
.15	49.5	81.7	.14	49.2	83.7	996.0	82.2	.0073
.15	50.1	81.8	.14	49.8	84.1	996.0	83.1	.0074
.22	48.9	81.8	.21	48.7	84.4	996.0	83.1	.0107
.26	49.7	81.6	.25	49.4	84.4	996.2	83.0	.0128
.32	50.1	81.3	.31	49.6	84.4	996.1	82.9	.0155
.41	50.1	80.6	.40	49.4	84.1	996.0	82.4	.0203
.50	49.9	79.9	.50	49.1	83.9	996.3	81.9	.0249
.60	50.2	79.1	.60	49.0	84.4	996.3	81.2	.0299
.69	49.9	78.2	.71	48.5	82.7	996.1	80.5	.0344
.78	50.4	77.3	.81	48.7	82.1	996.1	79.6	.0396
.87	49.9	76.5	.91	47.7	81.3	996.0	78.9	.0436

TABLE 89

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 7/8/76

TEST NUMBER 111 PART I

TEST DESCRIPTION CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 38.9 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 1000 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (LBM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1000.0	80.3	.0426		62.106	62.106	-0.000	62.106
996.0	79.2	.0397	55.829	56.116	55.972	-0.000	55.973
996.0	78.9	.0349	48.747	47.919	48.333	-0.000	48.334
996.0	79.1	.0301	40.648	40.259	40.453	-0.000	40.454
996.0	79.5	.0251	32.718	32.383	32.550	-0.000	32.551
996.0	80.0	.0201	25.206	24.871	25.039	-0.000	25.039
996.0	80.6	.0155	18.863	18.577	18.720	-0.000	18.720
996.0	81.1	.0133	15.687	15.435	15.561	-0.000	15.561
996.0	81.6	.0101	11.886	11.726	11.806	-0.000	11.806
996.0	82.2	.0073	8.010	7.907	7.963	-0.000	7.963
996.0	83.1	.0074	8.081	8.078	8.079	-0.000	8.079
996.0	83.1	.0107	12.261	12.239	12.249	-0.000	12.250
996.0	83.0	.0128	14.940	14.921	14.930	-0.000	14.931
996.0	82.9	.0155	18.552	18.524	18.536	-0.000	18.536
996.0	82.4	.0203	25.206	25.100	25.153	-0.000	25.153
996.0	81.9	.0249	32.222	32.038	32.130	-0.000	32.130
996.0	81.2	.0299	40.216	39.971	40.093	-0.000	40.093
996.0	80.5	.0344	47.821	46.973	47.397	-0.000	47.397
996.0	79.6	.0396	55.764	56.116	55.910	-0.000	55.910
996.0	78.9	.0436	63.328	63.997	63.663	-0.000	63.663

TARE DIFF. PRESS = -1.64000E-04 + -1.24930E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 89

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 7/8/76

TEST NUMBER 111 PART I TEST DESCRIPTION

CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 38.9 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 1000 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
70.307	1000.0	300.0	26.8	80.3	80.7	.0426	2.842	5.590	12.338	2.1833	31.054
70.029	996.0	299.4	26.2	79.2	75.0	.0397	2.646	5.210	11.487	3.9353	55.973
70.029	996.0	299.2	26.1	78.9	65.7	.0349	2.325	4.579	10.094	3.3982	48.334
70.029	996.0	299.3	26.2	79.1	56.3	.0301	2.004	3.945	8.698	2.8442	40.454
70.029	996.0	299.6	26.4	79.5	46.9	.0251	1.670	3.288	7.250	2.2885	32.551
70.029	996.	299.8	26.7	80.0	37.3	.0201	1.337	2.632	5.803	1.7604	25.039
70.029	996.0	300.1	27.0	80.6	28.7	.0155	1.031	2.031	4.478	1.3162	18.720
70.029	996.0	300.4	27.3	81.1	24.4	.0133	.881	1.734	3.824	1.0941	15.561
70.029	996.0	300.7	27.5	81.6	18.9	.0104	.686	1.352	2.980	.8300	11.806
70.029	996.0	301.0	27.9	82.2	13.1	.0073	.482	.949	2.093	.5598	7.963
70.029	996.0	301.5	28.4	83.1	13.3	.0074	.488	.960	2.117	.5686	8.079
70.029	996.0	301.5	28.4	83.1	19.7	.0107	.708	1.394	3.074	.8612	12.250
70.029	996.0	301.5	28.3	83.1	23.5	.0128	.847	1.668	3.677	1.0497	14.931
70.029	996.0	301.4	28.3	82.9	28.5	.0155	1.028	2.025	4.464	1.3032	18.536
70.029	996.0	301.2	28.0	82.4	37.4	.0203	1.343	2.645	5.832	1.7685	25.153
70.029	996.0	300.9	27.7	81.9	46.4	.0249	1.651	3.252	7.169	2.2590	32.130
70.029	996.0	300.5	27.4	81.2	55.8	.0299	1.984	3.907	8.614	2.8188	40.093
70.029	996.0	300.1	26.9	80.5	64.6	.0344	2.286	4.502	9.925	3.3324	47.397
70.029	996.0	299.6	26.5	79.6	74.6	.0396	2.635	5.187	11.440	3.9309	55.910
70.029	996.0	299.2	26.0	78.9	82.4	.0436	2.906	5.722	12.615	4.4766	63.663
*****	*****	*****	******	******							
70.043	996.4	300.4	27.2	80.9							
.026	.4	.7	.7	1.3	DEVIATIONS						

TABLE 90

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 7/8/76

TEST NUMBER 11J PART J

TEST DESCRIPTION: CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 38.9 mg TO SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 415 PSIA (NOMINAL)

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.88	47.5	85.8	.92	47.4	87.0	410.9	86.4	.1058
.78	47.2	85.3	.81	48.5	86.6	419.4	85.9	.0936
.69	47.4	86.1	.7	49.1	86.5	418.7	85.8	.0830
.60	47.7	86.0	.69	48.7	86.5	418.7	85.7	.0710
.51	47.4	85.2	.51	49.5	86.7	418.7	85.9	.0605
.41	47.9	85.5	.40	49.3	87.0	418.7	86.2	.0481
.31	47.7	85.8	.30	49.3	87.2	418.7	86.5	.0364
.26	47.2	86.3	.25	49.9	87.6	419.4	86.9	.0308
.22	47.7	86.5	.21	49.5	87.8	419.4	87.2	.0250
.15	47.7	86.8	.14	49.5	87.9	420.0	87.4	.0168
.15	47.9	87.1	.13	49.9	88.	420.7	87.5	.0167
.22	47.9	86.8	.21	49.5	88.1	420.7	87.4	.0256
.27	47.1	86.5	.25	49.7	87.9	421.7	87.2	.0308
.32	47.7	86.4	.31	49.1	87.8	420.7	87.0	.0370
.42	47.7	86.9	.41	49.1	87.6	420.0	86.7	.0483
.52	47.9	85.6	.51	49.1	87.4	419.4	86.5	.0603
.60	47.4	85.4	.61	49.3	87.0	418.7	86.2	.0721
.70	47.4	85.4	.71	49.1	86.8	418.1	86.1	.0836
.79	47.1	85.5	.81	48.3	86.8	417.4	86.2	.0940
.88	47.9	85.8	.91	47.8	86.8	417.4	86.3	.1045

TABLE 90

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11J PART J

TEST DESCRIPTION CONTAMINATED CONDITION-FLOW RATES VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 38.9 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 415 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (CFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
410.7	86.4	.1058	237.179	237.179	237.179	.002	237.177
419.4	85.9	.0936	183.585	183.585	183.585	.001	183.584
418.1	85.8	.0810	150.168	150.168	150.168	.001	150.166
418.1	85.7	.0716	118.327	118.327	118.327	.001	118.325
418.1	85.9	.0655	93.489	94.367	93.928	.000	93.926
418.1	84.2	.0481	68.899	69.147	68.923	.000	68.921
418.1	86.5	.0364	48.433	48.970	48.702	.000	48.700
419.7	86.9	.0318	40.609	40.323	40.469	.000	40.464
419.4	87.2	.0256	31.77	31.482	31.629	.000	31.625
420.0	87.4	.0168	0.119	19.867	19.993	.000	19.992
420.1	87.5	.0167	20.119	20.038	20.079	.000	20.077
420.1	87.4	.0256	32.637	32.514	32.576	.000	32.574
420.1	87.2	.0308	40.609	40.381	40.495	.000	40.493
420.1	87.0	.0370	49.309	49.916	49.612	.000	49.611
420.2	86.7	.0483	68.948	69.462	69.205	.000	69.203
419.4	86.5	.0603	92.642	93.421	93.032	.000	93.030
418.1	86.2	.0721	120.534	120.534	120.534	.001	120.532
418.1	86.1	.0836	152.059	152.058	152.059	.001	152.058
417.4	86.1	.0940	184.846	184.846	184.846	.001	184.845
417.4	86.3	.1045	229.613	229.613	229.613	.002	229.611

TARE DIFF. PRESS = -3.0000E-05 + -4.4400E-04 (ACFM) + 1.5093E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 90

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11J PART J

TEST DESCRIPTION: CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 38.9 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 415 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS									NET DIFFERENTIAL PRESS.	
PRESSURE		TEMPERATURE			FLOW RATE					
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	CFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
28.891	411.2	303.4	30.2	86.4	81.1	.1059	2.868	5.649	12.448	16.6752	237.177
29.484	419.4	303.1	30.0	85.9	73.2	.0936	2.593	5.109	11.258	12.9072	183.584
29.438	418.7	303.0	29.9	85.8	64.7	.0830	2.295	4.519	9.961	10.5577	150.166
29.438	418.7	303.	29.9	85.7	55.1	.0714	1.964	3.867	8.526	8.3191	118.325
29.438	418.7	303.1	30.0	85.9	46.8	.0605	1.673	3.294	7.262	6.6037	93.926
29.438	418.7	303.3	30.1	86.2	36.9	.0481	1.330	2.619	5.772	4.8456	68.921
29.438	418.7	303.5	30.3	86.5	27.8	.0364	1.006	1.981	4.366	3.4240	48.700
29.484	419.4	303.7	30.5	86.9	19.5	.0259	.852	1.678	3.700	2.8449	40.464
29.484	419.4	303.8	30.6	87.2	19.1	.0254	.692	1.363	3.004	2.2234	31.625
29.530	420.1	303.9	30.8	87.4	12.6	.0166	.464	.913	2.013	1.4056	19.992
29.575	420.7	304.0	30.9	87.5	11.5	.0167	.463	.912	2.011	1.4116	20.077
29.575	420.7	304.0	30.8	87.4	19.5	.0256	.710	1.399	3.080	2.2902	32.574
29.575	420.7	303.8	30.7	87.2	23.6	.0306	.854	1.684	3.708	2.8470	40.493
29.575	420.7	303.7	30.6	87.0	28.3	.0370	1.025	2.019	4.450	3.4880	49.611
29.530	420.1	303.6	30.4	86.7	37.2	.0483	1.337	2.633	5.804	4.8655	69.203
29.484	419.4	303.4	30.3	86.5	46.5	.0603	1.669	3.289	7.245	6.5407	93.030
29.438	418.7	303.3	30.1	86.2	55.9	.0721	1.992	3.926	8.647	8.4742	120.532
29.393	418.1	303.2	30.1	86.1	65.0	.0836	2.307	4.543	10.016	10.6907	152.058
29.347	417.5	303.2	30.1	86.2	73.1	.0940	2.591	5.101	11.246	12.9959	184.845
29.347	417.5	303.3	30.2	86.3	81.4	.1045	2.879	5.670	12.499	16.1433	229.611
*****	*****	*****	******	******							
29.445	418.8	303.5	30.3	86.6							
.084	1.2	.3	.3	.5	DEVIATIONS						

TABLE 91

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 7/8/76

TEST NUMBER 11K PART K

TEST DESCRIPTION: CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 53.9 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 1000 PSIA (NOMINAL)

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.86	49.4	65.7	.90	48.3	70.7	1007.9	68.2	.0431
.78	49.4	65.7	.81	48.7	71.6	1007.9	68.2	.0392
.69	49.4	66.2	.71	48.9	72.9	1007.9	68.5	.0344
.60	49.2	66.6	.60	49.1	71.	1 07.9	68.9	.0297
.50	49.9	67.4	.50	49.1	71.7	1007.9	69.5	.0247
.41	49.7	68.1	.41	49.2	2.2	1007.9	70.1	.0201
.31	49.1	68.9	.3.	49.7	72.7	1 07.9	70.8	.0153
.26	49.7	69.8	.25	49.3	73.3	1 07.9	71.5	.0127
.21	49.9	7 .8	.29	49.7	73.9	1 07.9	72.4	.0103
.15	49.5	71.7	.14	49.3	74.5	1 07.9	73.1	.0070
.15	49.4	73.2	.14	5 .2	75.6	1007.9	74.4	.0071
.22	49.1	73.9	.21	49.9	75.7	1007.9	74.5	.0106
.27	49.5	73.7	.26	49.7	75.8	1 07.9	74.5	.0129
.32	49.7	73.9	.31	49.9	76.	1007.9	74.5	.0153
.42	49.9	72.4	.41	49.3	75.9	1007.9	74.2	.0203
.50	5 .2	71.7	.5	49.5	75.7	1 07.9	73.7	.0249
.60	49.9	71.9	.60	48.7	75.	1 07.9	73.2	.0294
.69	5 .2	69.9	.70	48.9	74.8	1 07.9	72.4	.0342
.78	49.9	69.1	.81	48.3	74.1	1 07.9	71.6	.0386
.87	49.2	68.5	.91	48.1	73.5	1007.9	71.0	.0435

TABLE 91

DATE: 7/8/76

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11K PART A TEST DESCRIPTION CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 53.9 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 1000 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1007.2	66.2	.0431	66.657	67.318	66.987	-0.000	66.987
1007.2	58.2	.0392	58.767	59.417	59.092	-0.000	59.092
1007.2	55.5	.0344	49.619	50.251	49.935	-0.000	49.935
1007.2	58.9	.0297	42.247	41.924	42.086	-0.000	42.086
1007.2	59.5	.0247	33.628	33.286	33.457	-0.000	33.457
1007.2	70.1	.0201	26.234	25.935	26.084	-0.000	26.084
1007.2	70.8	.0153	19.011	18.772	18.892	-0.000	18.892
1007.2	71.5	.0127	15.457	15.226	15.342	-0.000	15.342
1007.2	72.4	.0113	12.213	11.969	12.091	-0.000	12.091
1007.2	73.1	.0070	7.91	7.746	7.828	-0.000	7.828
1007.2	74.4	.0071	7.965	7.974	7.970	-0.000	7.970
1007.2	74.5	.0116	12.40.	12.426	12.413	-0.000	12.413
1007.2	74.5	.0129	15.457	15. 97	15.427	-0.000	15.428
1007.2	74.5	.0153	18.762	18.715	18.738	-0.000	18.739
1007.2	74.2	.0203	26.233	26.164	26.198	-0.000	26.199
1007.2	73.7	.0249	33.628	33.516	33.572	-0.000	33.572
1007.2	73.2	.0294	41.318	41.116	41.217	-0.000	41.218
1007.2	72.4	.0342	48.992	49.619	49.306	-0.000	49.306
1007.2	71.6	.0386	57.012	57.836	57.424	-0.000	57.424
1007.2	71.0	.0435	67.157	67.950	67.554	-0.000	67.554

TARE DIFF. PRESS = -1.64000E-04 + -1.24930E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 91

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11K PART K

TEST DESCRIPTION: CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 53.9 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 1000 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
70.865	1007.2	293.3	20.1	68.2	84.1	.0431	2.968	5.849	12.886	4.7097	66.987
70.865	1007.2	293.2	20.1	68.2	76.4	.0391	2.699	5.314	11.715	4.1546	59.092
70.865	1007.2	293.5	20.3	68.5	66.7	.0344	2.366	4.657	10.272	3.5108	49.935
70.865	1007.2	293.7	20.5	68.9	57.3	.0297	2.042	4.020	8.863	2.9589	42.086
70.865	1007.2	294.0	20.9	69.5	47.3	.0247	1.692	3.331	7.344	2.3523	33.457
70.865	1007.2	294.4	21.2	70.1	38.3	.0201	1.377	2.711	5.977	1.8339	26.084
70.865	1007.2	294.7	21.6	70.8	29.1	.0153	1.047	2.066	4.546	1.3282	18.892
70.865	1007.2	295.1	22.0	71.5	24.1	.0127	.870	1.714	3.779	1.0786	15.342
70.865	1007.2	295.6	22.4	72.4	19.3	.0103	.703	1.384	3.052	.8501	12.091
70.865	1007.2	296.0	22.8	73.1	12.9	.0070	.475	.934	2.060	.5501	7.825
70.865	1007.2	296.7	23.6	74.4	13.1	.0071	.489	.950	2.095	.5603	7.970
70.865	1007.2	296.7	23.6	74.5	20.9	.0106	.723	1.422	3.138	.8727	12.413
70.865	1007.2	296.8	23.6	74.5	24.2	.0129	.876	1.729	3.804	1.0847	15.428
70.865	1007.2	296.7	23.6	74.5	28.8	.0153	1.038	2.044	4.505	1.3175	18.739
70.865	1007.2	296.6	23.4	74.2	38.5	.0213	1.383	2.724	6.005	1.8420	26.199
70.865	1007.2	296.3	23.2	73.7	47.7	.0249	1.697	3.346	7.369	2.3604	33.572
70.865	1007.2	296.0	22.9	73.2	56.4	.0294	2.007	3.956	8.713	2.8979	41.218
70.865	1007.2	295.6	22.4	72.4	65.9	.0343	2.333	4.599	10.139	3.4666	49.306
70.865	1007.2	295.1	22.0	71.6	74.8	.0386	2.636	5.187	11.441	4.0373	57.424
70.865	1007.2	294.8	21.7	71.0	84.4	.0435	2.976	5.861	12.918	4.7495	67.554
*****	*****	*****	******	******							
70.865	1007.2	295.2	22.1	71.8							
.000	.2	1.1	1.1	1.9	DEVIATIONS						

TABLE 92

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11L PART L TEST DESCRIPTION CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 53.9 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 415 PSIA (NOMINAL)

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS.		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.88	47.5	78.	.91	47.5	79.8	419.4	79.2	.1034
.79	50.1	78.7	.81	48.3	79.9	418.7	79.3	.0937
.69	50.2	78.7	.71	48.8	80.1	418.7	79.4	.0828
.60	50.3	78.9	.60	49.0	80.1	418.1	79.4	.0717
.51	49.9	78.8	.50	49.0	80.2	418.1	79.5	.0597
.41	49.9	78.9	.40	49.2	80.3	418.1	79.6	.0483
.31	50.2	79.0	.30	49.8	80.5	418.7	79.8	.0367
.27	49.5	79.2	.26	49.2	80.6	418.7	79.9	.0313
.22	50.4	79.4	.21	50.2	80.8	418.7	80.1	.0255
.14	50.4	79.6	.13	50.2	80.8	418.7	80.2	.0166
.14	49.9	79.9	.13	49.6	81.1	419.4	80.5	.0164
.22	50.2	79.9	.21	50.0	81.1	419.4	80.5	.0260
.27	49.9	79.8	.26	49.4	81.1	419.4	80.4	.0314
.32	50.2	79.5	.31	49.8	81.1	418.7	80.3	.0376
.42	50.1	79.3	.41	49.4	80.8	418.7	80.1	.0489
.51	49.9	79.2	.50	48.8	80.8	418.1	80.0	.0598
.60	50.4	79.1	.60	49.4	80.8	418.1	79.9	.0719
.70	50.2	79.2	.71	48.8	80.7	417.4	79.9	.0835
.78	50.1	79.2	.81	48.3	80.6	416.8	79.9	.0939
.88	47.7	79.7	.91	47.7	80.6	416.1	80.1	.1044

TABLE 92

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11L PART L TEST DESCRIPTION CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 53.9 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 415 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
419.4	79.2	.1034	257.256	257.256	257.256	.002	257.254
418.1	79.3	.0937	206.752	206.752	206.752	.001	206.750
418.1	79.4	.0818	165.086	165.086	165.086	.001	165.084
418.1	79.4	.0717	130.364	130.364	130.364	.001	130.363
418.1	79.5	.0597	99.430	99.430	99.430	.000	99.429
418.1	79.6	.0483	73.063	73.547	73.305	.000	73.303
418.1	79.8	.0367	51.311	52.083	51.697	.000	51.695
418.1	79.9	.0313	43.177	42.918	43.042	.000	43.041
418.1	80.1	.0255	33.441	33.244	33.343	.000	33.341
418.1	80.2	.0166	20.444	20.178	20.311	.000	20.309
419.4	80.5	.0164	20.008	19.949	19.979	-0.000	19.977
419.4	80.5	.0260	34.248	34.116	34.177	.000	34.176
419.4	80.4	.0314	42.805	42.562	42.683	.000	42.682
418.1	80.3	.0376	52.312	53.029	52.671	.000	52.669
418.1	80.1	.0489	73.818	74.494	74.152	.000	74.150
418.1	80.0	.0598	98.483	98.483	98.483	.000	98.482
418.1	79.9	.0719	130.048	130.048	130.048	.001	130.047
417.4	79.9	.0835	166.033	166.033	166.033	.001	166.031
416.8	79.9	.0939	207.067	207.067	207.067	.001	207.066
416.1	80.1	.1044	271.776	271.776	271.776	.002	271.774

TARE DIFF. PRESS = -3.40000E-05 + -4.44000E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 92

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11L PART L

TEST DESCRIPTION CONTAMINATED BONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 53.9 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 415 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.484	419.4	299.4	26.2	79.2	82.0	.1034	2.899	5.701	12.582	18.0868	257.254
29.438	418.7	299.4	26.3	79.3	74.1	.0937	2.622	5.161	11.383	14.5360	206.750
29.438	418.7	299.5	26.3	79.4	65.3	.0828	2.317	4.561	10.059	11.6066	165.084
29.393	418.1	299.5	26.4	79.4	56.8	.0717	2.004	3.949	8.699	9.1654	130.363
29.393	418.1	299.5	26.4	79.5	46.6	.0597	1.667	3.285	7.237	6.9905	99.429
29.393	418.1	299.6	26.5	79.6	37.3	.0483	1.348	2.659	5.851	5.1537	73.303
29.438	418.7	299.7	26.5	79.8	28.3	.0367	1.027	2.026	4.457	3.6345	51.695
29.438	418.7	299.8	26.6	79.9	24.2	.0313	.876	1.729	3.805	3.0261	43.041
29.438	418.7	299.9	26.7	80.1	19.6	.0255	.711	1.404	3.088	2.3441	33.341
29.438	418.7	299.9	26.8	80.2	12.6	.0166	.465	.919	2.020	1.4279	20.309
29.484	419.4	300.1	26.9	80.5	11.5	.0164	.460	.905	1.996	1.4045	19.977
29.484	419.4	300.1	26.9	80.5	20.0	.0260	.728	1.436	3.160	2.4028	34.176
29.484	419.4	300.1	26.9	80.4	24.2	.0314	.878	1.727	3.811	3.0008	42.682
29.438	418.7	300.0	26.8	80.3	29.1	.0376	1.051	2.070	4.563	3.7030	52.669
29.438	418.7	299.9	26.7	80.1	37.9	.0489	1.366	2.699	5.930	5.2133	74.150
29.393	418.1	299.9	26.7	80.0	46.5	.0598	1.668	3.284	7.240	6.9240	98.482
29.393	418.1	299.8	26.6	79.9	56.2	.0719	2.006	3.950	8.708	9.1432	130.047
29.347	417.4	299.8	26.6	79.9	65.5	.0835	2.326	4.580	10.098	11.6732	166.031
29.302	416.8	299.8	26.6	79.9	73.8	.0939	2.613	5.149	11.345	14.5582	207.066
29.256	416.1	299.9	26.7	80.1	82.0	.1044	2.899	5.708	12.585	19.1076	271.774
*****	*****	*****	******	******							
29.416	418.4	299.8	26.6	79.9							
.046	.9	.2	.2	.3	DEVIATIONS						

TABLE 93

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 7/8/76

TEST NUMBER 11M PART M TEST DESCRIPTION CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE,TOTAL OF 67.3 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 1000 PSIA (NOMINAL)

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.87	49.7	76.6	.91	47.5	82.1	1007.9	79.3	.0427
.78	50.2	76.1	.81	48.5	81.5	1004.0	78.8	.0391
.69	50.4	75.9	.71	48.8	81.2	1004.0	78.5	.0346
.60	50.1	76.1	.60	49.0	81.3	1004.0	78.7	.0296
.50	50.1	76.7	.50	49.0	81.5	1004.0	79.1	.0248
.41	50.4	77.3	.40	49.0	81.8	1004.0	79.6	.0203
.31	49.9	78.3	.30	49.4	82.4	1004.0	80.3	.0152
.26	49.5	79.0	.25	49.0	82.7	1004.0	80.8	.0126
.22	49.5	79.5	.21	49.3	83.1	1004.0	81.3	.0105
.14	49.5	81.4	.13	49.2	83.5	1007.9	81.9	.0067
.14	50.4	81.6	.13	50.2	84.3	1007.9	83.0	.0069
.23	49.5	81.5	.22	49.3	84.3	1007.9	82.9	.0109
.26	49.5	81.3	.25	49.1	84.4	1007.9	82.8	.0125
.32	50.1	81.1	.31	49.8	84.4	1007.9	82.7	.0154
.41	49.7	80.4	.40	49.0	84.1	1007.9	82.3	.0200
.50	49.5	79.4	.50	48.5	83.7	1007.9	81.6	.0244
.60	50.1	78.5	.60	49.0	83.2	1004.0	80.8	.0295
.69	50.4	77.4	.71	48.8	82.4	1004.0	79.9	.0346
.78	50.2	76.8	.81	48.5	81.8	1004.0	79.3	.0390
.87	49.7	76.0	.91	47.5	81.2	1004.0	78.6	.0431

TABLE 93

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 7/8/76

TEST NUMBER 11M PART M

TEST DESCRIPTION CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 67.3 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 1000 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRES (PSID)
1007.9	79.3	.0427	71.193	71.774	71.483	-0.000	71.484
1004.9	78.8	.0391	63.074	63.577	63.325	-0.000	63.326
1004.9	78.5	.0346	53.562	54.119	53.841	-0.000	53.841
1004.9	78.7	.0296	45.096	44.867	44.981	-0.000	44.982
1004.9	79.1	.0248	36.172	35.887	36.030	-0.000	36.030
1004.9	79.6	.0203	28.121	27.9 8	28.034	-0.000	28.035
1004.9	80.3	.0152	20.008	19.835	19.921	-0.000	19.922
1004.9	80.8	.0126	16.081	15.835	15.958	-0.000	15.958
1004.9	81.3	.0105	12.962	12.81[illegible]	12.886	-0.000	12.886
1007.9	81.9	.0067	7.965	7.79[illegible]	7.879	-0.000	7.880
1007.9	83.0	.0069	7.903	7.9 7	7.905	-0.000	7.905
1007.9	82.9	.0109	13.39[illegible]	13.38[illegible]	13.389	-0.000	13.390
1007.9	82.8	.0128	15.707	15.66[illegible]	15.685	-0.000	15.685
1007.9	82.7	.0154	19.946	19.892	19.919	-0.000	19.919
1007.9	82.3	.0200	27.166	27.[illegible]48	27.107	-0.000	27.107
1007.9	81.6	.0244	34.931	34.853	34.892	-0.000	34.892
1004.9	80.8	.0295	44.167	43.945	44.056	-0.000	44.056
1004.9	79.9	.0346	53.061	53.8.4	53.433	-0.000	53.433
1004.9	79.3	.0398	62.448	62.947	62.697	-0.000	62.698
1004.9	78.6	.0451	72.065	72.720	72.392	-0.000	72.393

TARE DIFF. PRESS = -1.64000E-04 + -1.26930E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 93

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 7/8/76

TEST NUMBER 11M PART N TEST DESCRIPTION CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 67.3 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 1000 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS
PRESSURE		TEMPERATURE			FLOW RATE					
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MI	CFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
70.865	1007.2	299.4	26.3	79.3	81.7	.427	2.879	5.268	12.496	5.0258	71.484
70.586	1004.0	299.2	26.0	78.8	74.5	.0391	2.626	5.171	11.401	4.4522	63.326
70.586	1004.0	299.0	25.8	78.5	65.5	.0346	2.323	4.573	10.082	3.7854	53.841
70.586	1004.	299.1	25.9	78.7	55.9	.296	1.987	3.914	8.625	3.1625	44.982
70.586	1004.0	299.3	26.2	79.1	46.6	.0248	1.666	3.280	7.232	2.5332	36.030
70.586	1004.0	299.6	26.4	79.6	37.9	.0203	1.363	2.683	5.919	1.9710	28.035
70.586	1004.0	300.0	26.8	80.3	28.2	.0152	1.018	2.004	4.419	1.4006	19.922
70.586	1004.0	300.3	27.1	80.8	23.2	.0126	.840	1.654	3.647	1.1220	15.958
70.586	1004.0	300.5	27.4	81.3	19.1	.0105	.699	1.377	3.035	.9060	12.886
70.865	1007.2	300.9	27.7	81.9	12.3	.0067	.452	.890	1.963	.5540	7.880
70.865	1007.2	301.5	28.3	83.0	12.6	.0069	.460	.902	1.997	.5558	7.905
70.865	1007.2	301.4	28.3	82.9	20.2	.0109	.730	1.438	3.171	.9414	13.390
70.865	1007.2	301.4	28.2	82.8	23.1	.0125	.837	1.648	3.634	1.1028	15.685
70.865	1007.2	301.3	28.2	82.7	28.6	.0154	1.030	2.032	4.473	1.4004	19.919
70.865	1007.2	301.1	27.9	82.3	37.3	.0200	1.339	2.637	5.813	1.9058	27.107
70.865	1007.2	300.7	27.5	81.6	45.8	.0244	1.639	3.228	7.116	2.4532	34.892
70.586	1004.0	300.3	27.1	80.8	55.5	.0295	1.973	3.888	8.567	3.0975	44.056
70.586	1004.0	299.8	26.6	79.9	65.4	.0346	2.319	4.567	10.069	3.7567	53.433
70.586	1004.0	299.4	26.3	79.3	74.1	.0390	2.615	5.150	11.353	4.4081	62.698
70.586 *****	1004.0 *****	299.8 *****	25.9 ******	78.6 ******	82.1	.0431	2.896	5.702	12.573	5.0897	72.393
70.698	1005.0	300.2	27.0	80.6							
.134	1.2	.8	.8	1.4	DEVIATIONS						

TABLE 94

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11N PART N TEST DESCRIPTION

CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE TOTAL OF 67.3 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 415 PSIA (NOMINAL)

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.83	50.2	85.5	.86	48.3	86.3	416.8	85.9	.0997
.79	50.4	85.6	.81	48.7	86.5	416.1	86.0	.0952
.70	50.4	85.4	.71	49.-	86.5	416.1	86.0	.0840
.61	49.9	85.4	.61	48.7	86.7	416.1	86.0	.0717
.51	50.2	85.4	.50	49.4	86.7	416.8	86.1	.0605
.41	50.2	85.5	.40	49.4	87.0	416.8	86.2	.0488
.31	49.9	85.9	.30	49.4	87.2	416.8	86.6	.0364
.27	49.9	86.	.25	49.4	87.4	416.8	86.7	.0309
.22	50.2	86.-	.21	50.0	87.6	417.4	86.9	.0254
.15	50.4	86.6	.14	50.2	87.9	417.4	87.2	.0172
.15	50.2	87.-	.13	50.0	88.2	418.1	87.6	.0169
.23	49.7	86.9	.21	49.-	88.1	418.1	87.5	.0260
.27	49.7	86.7	.25	49.2	88.1	418.1	87.4	.0309
.32	49.9	86.5	.31	49.-	88.-	418.1	87.2	.0376
.42	49.9	86.2	.40	49.2	87.9	417.4	87.0	.0486
.51	49.9	85.9	.50	48.8	87.7	417.4	86.8	.0598
.61	49.7	85.8	.61	48.7	87.5	416.8	86.6	.0715
.70	49.9	85.7	.71	48.5	87.4	416.1	86.6	.0830
.78	49.9	85.9	.81	48.3	87.3	415.5	86.6	.0939
.83	49.7	86.3	.86	47.7	87.2	415.5	86.7	.0993

TABLE 94

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11N PART N TEST DESCRIPTION CONTAMIMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE TOTAL OF 67.3 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 415 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
416.8	85.9	.0997	292.875	292.875	292.875	.001	292.873
416.1	86.0	.0952	255.674	255.674	255.674	.001	255.673
416.1	86.0	.0840	195.145	195.145	195.145	.001	195.143
416.1	86.0	.0717	147.541	147.541	147.541	.001	147.539
416.8	86.1	.0655	112.547	112.547	112.547	.000	112.546
416.9	86.2	.0488	82.116	82.282	82.199	.000	82.198
416.9	86.6	.0364	55.566	55.801	55.683	.000	55.682
416.8	86.7	.0309	46.024	45.732	45.878	.000	45.877
417.4	86.9	.0254	35.924	35.657	35.791	.000	35.789
417.4	87.2	.0172	22.686	22.452	22.569	.000	22.569
418.1	87.6	.0169	22.312	22.237	22.275	.000	22.273
418.1	87.5	.0260	36.793	36.635	36.714	.000	36.712
418.1	87.4	.0309	45.467	45.213	45.340	.000	45.339
418.1	87.2	.0376	57.319	57.692	57.505	.000	57.504
417.4	87.0	.0486	80.263	80.706	80.485	.000	80.483
417.4	86.8	.0598	109.710	109.710	109.710	.000	109.708
416.8	86.6	.0715	145.964	145.964	145.964	.001	145.963
416.1	86.6	.0833	189.785	189.785	189.785	.001	189.784
415.5	86.6	.0939	245.586	245.586	245.586	.001	245.585
415.9	86.7	.0993	296.342	296.342	296.342	.001	296.341

TARE DIFF. PRESS = -3.40000E-04 + -4.44000E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 94

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 7-8-76

TEST NUMBER 11N PART N TEST DESCRIPTION CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE TOTAL OF 67.3 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 415 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.302	416.8	303.1	29.9	85.9	77.4	.997	2.745	5.404	11.914	20.5910	292.873
29.256	416.1	303.2	30.0	86.0	73.8	.0952	2.615	5.159	11.354	17.9756	255.673
29.256	416.1	303.1	30.0	86.0	64.9	.0840	2.309	4.541	10.024	13.7199	195.143
29.256	416.1	303.2	30.0	86.0	55.2	.0717	1.971	3.881	8.557	10.3730	147.539
29.302	416.9	303.2	30.0	86.1	46.5	.0605	1.665	3.277	7.229	7.9127	112.546
29.302	416.9	303.3	30.1	86.2	37.1	.0488	1.342	2.643	5.826	5.7791	82.198
29.302	416.9	303.5	30.3	86.6	27.6	.0364	1.001	1.970	4.344	3.9148	55.682
29.302	416.9	303.6	30.4	86.7	3.3	.0309	.848	1.671	3.683	3.2254	45.877
29.347	417.4	303.7	30.5	86.9	19.3	.0254	.700	1.378	3.038	2.5162	35.789
29.347	417.4	303.8	30.7	87.2	12.8	.0172	.473	.936	2.065	1.5831	22.517
29.393	418.1	304.1	30.9	87.6	11.6	.0169	.466	.921	2.021	1.5660	22.273
29.393	418.1	304.0	30.8	87.5	19.6	.0260	.715	1.410	3.102	2.5811	36.712
29.393	418.1	303.9	30.8	87.4	23.4	.0309	.850	1.673	3.689	3.1876	45.339
29.393	418.1	303.8	30.7	87.2	28.7	.0376	1.036	2.040	4.498	4.0429	57.504
29.347	417.4	303.7	30.6	87.0	37.1	.0486	1.338	2.633	5.808	5.6585	80.483
29.347	417.4	303.6	30.4	86.8	45.9	.0598	1.647	3.244	7.151	7.7133	109.708
29.302	416.8	303.5	30.4	86.6	55.1	.0715	1.965	3.870	8.531	10.2622	145.963
29.256	416.1	303.5	30.3	86.6	64.1	.0830	2.277	4.484	9.886	13.3431	189.784
29.210	415.5	303.5	30.3	86.6	72.8	.0939	2.574	5.068	11.172	17.2663	245.585
29.210	415.5	303.6	30.4	86.7	76.7	.0993	2.720	5.359	11.807	20.8349	296.341
*****	*****	*****	******	******							
29.311	416.9	303.5	30.4	86.7							
.047	.1	.2	.2	.4	DEVIATIONS						

TABLE 95

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 110 PART 0 TEST DESCRIPTION CONTAMINATED CONDITION - FLOW RATE versus DIFFERENTIAL PRESSURE. TOTAL OF 83.5 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 1000 PSIA (NOMINAL)

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE, (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.86	50.1	7 .3	.91	47.9	76.1	1015.9	73.2	.0427
.78	50.2	74.0	.81	48.5	75.7	1015.9	72.8	.0386
.69	50.2	7 .1	.73	48.7	75.5	1 15.9	72.8	.0338
.60	50.1	7 .4	.61	49.1	75.5	1015.9	72.9	.0296
.50	49.9	7 .9	.50	49.1	75.8	1 11.9	73.3	.0246
.41	49.9	71.6	.40	49.3	76.2	1 11.9	73.9	.0200
.31	49.9	72.6	.3	49.5	76.7	1 11.9	74.6	.0150
.27	50.2	73.1	.26	50.1	77.1	1 11.9	75.0	.0129
.22	50.1	73.8	.21	49.9	77.4	1011.9	75.6	.0104
.15	49.5	74.5	.14	49.3	77.8	1 15.9	76.1	.0071
.15	49.7	76.	.14	49.5	78.9	1 15.9	77.6	.0071
.22	50.1	76.2	.21	49.9	79.0	1015.9	77.6	.0108
.27	49.7	76.	.26	49.3	79.1	1 15.9	77.5	.0128
.32	49.5	75.7	.31	49.1	79.1	1 15.9	77.4	.0151
.41	49.7	75.1	.40	49.1	78.8	1015.9	76.9	.0198
.51	50.2	74.2	.51	49.5	78.5	1 11.9	76.4	.0250
.60	50.2	73.4	.61	49.1	77.9	1 11.9	75.6	.0296
.69	50.2	72.7	.71	48.9	77.2	1 11.9	74.7	.0344
.78	5 .2	71.4	.81	48.5	76.5	1 11.9	73.9	.0386
.87	50.1	7 .5	.91	47.9	75.7	1 11.9	73.1	.0430

TABLE 95

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 110 PART 0

TEST DESCRIPTION CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 83.5 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 1000 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1015.Y	73.2	.0427	77.951	78.597	78.274	=0.000	78.274
1015.Y	72.8	.0386	67.49[illegible]	68.496	67.993	=0.000	67.993
1015.Y	72.8	.0328	56.607	57.449	57.028	=0.000	57.028
1015.Y	72.9	.0296	48.645	48.295	48.470	=0.000	48.470
1011.Y	73.3	.0246	38.192	37.890	38.041	=0.000	38.041
1011.Y	73.9	.0200	29.388	29.[illegible]34	29.211	=0.000	29.211
1011.Y	74.6	.0150	20.688	20.490	20.589	=0.000	20.589
1011.Y	75.0	.0129	17.327	17.113	17.220	=0.000	17.220
1011.Y	75.6	.0114	13.4[illegible]3	13.226	13.314	=0.000	13.314
1015.Y	76.1	.0071	8.788	8.669	8.723	=0.000	8.723
1015.Y	77.6	.0071	8.725	8.716	8.720	=0.000	8.721
1015.Y	77.6	.0118	13.9[illegible]1	13.911	13.906	=0.000	13.906
1015.Y	77.[illegible]	.0128	17.01[illegible]	17.056	17.036	=0.000	17.036
1015.Y	77.4	.0151	20.875	20.891	20.883	=0.000	20.883
1015.Y	76.9	.[illegible]198	28.891	28.8[illegible]4	28.848	=0.000	28.848
1011.Y	76.4	.0250	38.750	38.639	38.694	=0.000	38.694
1011.Y	75.6	.0296	48.089	47.663	47.876	=0.000	47.876
1011.Y	74.7	.[illegible]344	57.484	58.396	57.940	=0.000	57.940
1011.Y	73.9	.0[illegible]86	67.740	68.496	68.118	=0.000	68.118
1011.Y	73.1	.0430	79.066	79.860	79.463	=0.000	79.463

TARE DIFF. PRESS = -1.64000E-04 + -1.26930E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 95

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 110 PART 0

TEST DESCRIPTION: CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 83.5 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 1000 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS

PRESSURE		TEMPERATURE			FLOW RATE					NET DIFFERENTIAL PRESS	
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
71.423	1015.7	296.0	22.9	73.2	83.5	.0427	2.936	5.781	12.746	5.5032	78.274
71.423	1015.7	295.9	22.7	72.8	75.4	.0386	2.655	5.227	11.523	4.7804	67.993
71.423	1015.7	295.8	22.7	72.8	65.7	.0338	2.326	4.577	10.095	4.0095	57.028
71.423	1015.7	295.9	22.7	72.9	57.2	.0296	2.033	4.005	8.824	3.4078	48.470
71.144	1011.7	296.1	23.0	73.3	47.2	.0246	1.682	3.311	7.300	2.6746	38.041
71.144	1011.7	296.4	23.3	73.9	38.1	.0200	1.366	2.690	5.930	2.0538	29.211
71.144	1011.7	296.8	23.7	74.6	28.4	.0150	1.021	2.010	4.432	1.4476	20.589
71.144	1011.7	297.1	23.9	75.0	24.5	.0129	.882	1.738	3.827	1.2107	17.220
71.144	1011.7	297.4	24.2	75.6	19.6	.0104	.710	1.397	3.080	.9361	13.314
71.423	1015.7	297.7	24.5	76.1	13.2	.0071	.483	.951	2.097	.6133	8.723
71.423	1015.7	298.5	25.3	77.6	13.2	.0071	.484	.956	2.099	.6131	8.721
71.423	1015.7	298.5	25.3	77.6	20.4	.0108	.735	1.448	3.192	.9777	13.906
71.423	1015.7	298.5	25.3	77.5	24.1	.0128	.871	1.719	3.783	1.1978	17.036
71.423	1015.7	298.4	25.2	77.4	28.8	.0151	1.032	2.033	4.481	1.4682	20.883
71.423	1015.7	298.1	25.0	76.9	37.7	.0198	1.350	2.665	5.862	2.0282	28.848
71.144	1011.7	297.8	24.6	76.4	47.8	.0251	1.702	3.356	7.390	2.7205	38.694
71.144	1011.7	297.4	24.2	75.6	56.8	.0296	2.015	3.968	8.747	3.3660	47.876
71.144	1011.7	296.9	23.7	74.7	66.3	.0344	2.345	4.621	10.179	4.0736	57.940
71.144	1011.7	296.5	23.3	73.9	74.7	.0386	2.637	5.194	11.449	4.7892	68.118
71.144	1011.7	296.0	22.8	73.1	83.5	.0430	2.945	5.797	12.784	5.5868	79.483
*****	*****	*****	******	******							
71.283	1013.7	297.1	23.9	75.1							
.139	2.0	.8	.8	1.5	DEVIATIONS						

TABLE 96

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11P PART P TEST DESCRIPTION

CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 83.5 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 415 PSIA (NOMINAL)

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSI_A)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSI_A)	TEMP (DEG. F)	PRESSURE (PSI_A)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.82	49.9	81.	.85	47.9	82.8	417.4	82.2	.0976
.79	50.2	81.5	.81	48.5	82.5	415.5	82.0	.0948
.70	50.2	81.3	.71	48.9	82.5	415.5	81.9	.0837
.60	50.2	81.1	.60	49.3	82.5	415.5	81.8	.0723
.51	49.7	81.1	.51	48.9	82.5	415.5	81.8	.0606
.42	50.1	81.1	.40	49.5	82.5	415.5	81.8	.0491
.32	49.9	81.1	.31	49.5	82.5	415.5	81.8	.0374
.27	50.1	81.2	.25	49.7	82.7	415.5	81.9	.0311
.22	50.2	81.3	.20	49.9	82.7	415.5	82.0	.0253
.15	50.4	81.5	.14	50.2	82.7	415.5	82.1	.0173
.15	50.4	81.6	.14	50.2	82.9	416.1	82.3	.0173
.22	50.2	81.6	.21	49.9	82.9	416.1	82.2	.0262
.27	49.7	81.4	.26	49.3	82.7	416.1	82.0	.0311
.32	49.9	81.3	.31	49.5	82.7	416.1	82.0	.0376
.42	50.2	81.0	.41	49.9	82.6	415.5	81.8	.0501
.51	49.7	80.8	.50	48.9	82.5	415.5	81.6	.0598
.60	49.9	80.7	.60	48.7	82.2	414.8	81.5	.0715
.70	50.1	80.7	.71	48.7	82.1	414.2	81.4	.0835
.79	49.9	80.3	.81	48.3	82.2	413.5	81.8	.0949
.79	50.4	82.1	.81	48.7	82.7	412.9	82.4	.0952

TABLE 96

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11P PART B

TEST DESCRIPTION CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 83.5 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 415 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (CFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
417.4	82.2	.0976	310.180	310.180	310.180	.001	310.179
415.5	82.	.0948	280.825	280.825	280.825	.001	280.823
415.5	81.9	.0837	209.172	209.172	209.172	.001	209.170
415.5	81.8	.0723	158.983	158.983	158.983	.001	158.982
415.5	81.8	.0666	119.211	119.211	119.211	.000	119.210
415.5	81.8	.0491	88.791	87.330	87.061	.000	87.059
415.5	81.8	.0374	59.697	60.184	59.940	.000	59.939
415.5	81.9	.0311	47.986	47.558	47.772	.000	47.771
415.5	82.0	.0253	37.098	36.736	36.914	.000	36.913
415.5	82.1	.0173	23.445	23.191	23.319	.000	23.317
416.1	82.3	.0173	23.321	23.316	23.319	.000	23.318
416.1	82.2	.0282	38.151	38.053	38.102	.000	38.101
416.1	82.0	.0311	47.615	47.384	47.500	.000	47.499
416.1	82.0	.0376	59.321	60.184	59.753	.000	59.751
415.5	81.8	.0551	86.913	87.962	87.437	.000	87.436
415.5	81.6	.0598	115.739	115.739	115.739	.000	115.738
414.8	81.5	.0715	154.880	154.880	154.880	.001	154.878
414.6	81.4	.0835	206.647	206.647	206.647	.001	206.645
413.5	81.8	.0949	284.612	284.612	284.612	.001	284.611
412.9	82.4	.0962	298.817	298.817	298.817	.001	298.815

TARE DIFF. PRESS = -3.40000E-05 + -4.44000E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 96

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11P PART P

TEST DESCRIPTION: CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 83.5 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 415 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS									NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE					
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.347	417.4	311.1	27.9	82.2	76.5	.0976	2.719	5.939	11.764	21.8077	310.179
29.210	415.5	300.9	27.8	82.0	74.1	.0948	2.691	5.161	11.377	19.7438	280.823
29.210	415.5	300.9	27.7	81.9	65.2	.0837	2.314	4.559	10.044	14.7061	209.170
29.210	415.5	300.8	27.7	81.8	56.4	.0723	1.998	3.939	8.674	11.1775	158.982
29.210	415.5	300.8	27.7	81.8	46.7	.0606	1.674	3.299	7.267	8.3813	119.210
29.210	415.5	300.8	27.6	81.8	37.7	.0491	1.357	2.676	5.890	6.1209	87.059
29.210	415.5	300.8	27.7	81.8	28.7	.0374	1.035	2.039	4.494	4.2141	59.939
29.210	415.5	300.9	27.7	81.9	23.6	.0311	.860	1.693	3.732	3.3586	47.771
29.210	415.5	300.9	27.8	82.0	19.2	.0253	.700	1.379	3.037	2.5952	36.913
29.210	415.5	301.0	27.8	82.1	12.9	.0173	.478	.944	2.076	1.6393	23.317
29.256	416.1	301.1	27.9	82.3	12.9	.0173	.478	.944	2.075	1.6390	23.312
29.256	416.1	301.1	27.9	82.2	19.9	.0262	.725	1.427	3.146	2.6787	38.101
29.256	416.1	301.0	27.8	82.0	23.8	.0311	.861	1.699	3.739	3.3395	47.499
29.256	416.1	300.9	27.8	82.0	28.8	.0376	1.040	2.047	4.517	4.2009	59.751
29.210	415.5	300.8	27.7	81.8	38.4	.0501	1.384	2.729	6.009	6.1474	87.436
29.210	415.5	300.7	27.6	81.6	46.3	.0598	1.655	3.259	7.185	8.1372	115.738
29.165	414.9	300.6	27.5	81.5	55.2	.0715	1.975	3.888	8.573	10.8890	154.878
29.119	414.4	300.6	27.4	81.4	64.8	.0835	2.304	4.539	10.001	14.5286	206.645
29.073	413.9	300.8	27.6	81.8	73.8	.0949	2.612	5.144	11.341	20.0102	284.611
29.028	412.9	311.1	28.0	82.4	74.5	.0962	2.640	5.197	11.462	21.0088	298.815
*****	*****	*****	******	******							
29.203	415.4	300.9	27.7	81.9							
.043	.9	.1	.1	.2	DEVIATIONS						

TABLE 97

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 110 PART Q

TEST DESCRIPTION

CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 100.2 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 1000 PSIA (NOMINAL).

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.85	42.7	77.	.91	47.6	81.7	1 11.9	79.3	.0425
.78	42.9	76.2	.81	48.3	81.2	1 11.9	78.7	.0387
.69	42.9	74.1	.7	48.5	81.1	1 11.9	78.6	.0338
.60	42.7	73.	.60	48.5	81.1	1 11.9	78.6	.0291
.50	42.7	74.6	.50	48.9	81.2	1 11.9	78.9	.0245
.41	42.6	77.1	.4	49.3	81.4	1 11.9	79.2	.0198
.32	42.	77.9	.30	49.9	81.8	1 11.9	79.9	.0153
.27	42.5	79.9	.29	49.1	83.2	1 15.9	81.6	.0127
.22	42.1	8 .2	.21	49.9	83.4	1 15.9	81.8	.0104
.15	42.9	81.8	.14	49.9	84.7	1 15.9	82.3	.0070
.15	42.9	81.8	.13	49.7	84.3	1 15.9	83.1	.0069
.23	42.5	8 .6	.21	49.3	84.2	1 15.9	82.9	.0107
.27	42.9	81.2	.25	49.5	84.1	1 15.9	82.7	.0127
.32	42.7	8 .8	.31	49.3	84.	1 15.9	82.4	.0153
.42	42.5	8 .1	.41	48.9	8 .7	1 15.9	81.9	.0199
.51	42.7	79.2	.51	48.9	83.4	1 15.9	81.3	.0246
.60	2 .4	78.2	.61	49.3	82.7	1 15.9	80.4	.0296
.69	42.	77.1	.71	49.1	81.8	1 15.9	79.4	.0343
.78	42.9	76.4	.81	48.3	81.2	1 11.9	78.8	.0385
.87	42.1	75.7	.91	47.9	9 .6	1 11.9	78.1	.0430

TABLE 97

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 110 PART Q

TEST DESCRIPTION CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 100.2 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 1000 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (CFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
1011.X	79.3	.425	81.911	82.701	82.306	=0.000	82.306
1011.X	78.7	.0387	71.733	72.600	72.166	=0.000	72.167
1011.X	78.6	.0338	59.737	60.605	60.171	=0.000	60.171
1011.X	78.6	.291	48.973	49.873	49.423	=0.000	49.423
1011.X	78.9	.0245	40.141	39.798	39.970	=0.000	39.970
1011.X	79.2	.0198	30.460	30.145	30.303	=0.000	30.303
1011.X	79.9	.0153	22.188	21.894	22.041	=0.000	22.041
1015.X	81.6	.0127	17.827	17.606	17.716	=0.000	17.716
1015.X	81.8	.0114	14.022	13.780	13.901	=0.000	13.901
1015.X	82.1	.0070	8.84[illegible]	8.762	8.801	=0.000	8.801
1015.X	83.1	.0069	8.715	8.762	8.738	=0.000	8.739
1015.X	82.9	.0117	14.272	14.293	14.283	=0.000	14.283
1015.X	82.7	.0127	17.640	17.662	17.651	=0.000	17.651
1015.X	82.4	.0153	21.939	21.894	21.916	=0.000	21.917
1015.X	81.9	.0199	30.4[illegible]	30.317	30.389	=0.000	30.389
1015.X	81.3	.0246	40.141	39.971	40.056	=0.000	40.056
1015.X	80.4	.0296	49.724	50.514	50.114	=0.000	50.114
1015.X	79.4	.0349	60.864	61.552	61.207	=0.000	61.208
1011.X	78.8	.0385	71.483	72.284	71.884	=0.000	71.884
1011.X	78.1	.0439	84.007	84.910	84.459	=0.000	84.459

TARE DIFF. PRESS = -1.64000E-04 + -1.26930E-02 (ACFM) + 2.48070E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 97

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 110 PART 0 TEST DESCRIPTION CONTAMINATED CONDITION - FLOW RATE VERSUS DIFFERENTIAL PRESSURE. TOTAL OF 100.2 mg OF CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 1000 PSIA (NOMINAL).

TEST SPECIMEN INLET CONDITIONS

PRESSURE		TEMPERATURE			FLOW RATE					NET DIFFERENTIAL PRESS	
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	CFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
71.144	1011.2	299.5	26.3	79.3	81.6	.0425	2.874	5.660	12.478	5.7867	82.306
71.144	1011.2	299.1	25.9	78.7	74.4	.0387	2.619	5.151	11.369	5.0738	72.167
71.144	1011.2	299.0	25.9	78.6	64.6	.0338	2.287	4.504	9.929	4.2304	60.171
71.144	1011.2	299.1	25.9	78.6	55.5	.0291	1.972	3.888	8.561	3.4748	49.423
71.144	1011.2	299.2	26.1	78.9	46.5	.0245	1.658	3.269	7.197	2.8102	39.970
71.144	1011.2	299.4	26.2	79.2	37.2	.0198	1.338	2.639	5.810	2.1305	30.303
71.144	1011.2	299.8	26.6	79.9	28.7	.0153	1.036	2.032	4.496	1.5496	22.041
71.423	1015.2	300.7	27.5	81.6	23.7	.0127	.859	1.691	3.728	1.2456	17.716
71.423	1015.2	300.8	27.7	81.8	19.4	.0104	.704	1.387	3.057	.9774	13.901
71.423	1015.2	301.1	27.9	82.3	12.8	.0070	.471	.921	2.043	.6188	8.801
71.423	1015.2	301.5	28.4	83.1	12.6	.0069	.466	.915	2.024	.6144	8.739
71.423	1015.2	301.5	28.3	82.9	19.9	.0107	.723	1.423	3.136	1.0042	14.283
71.423	1015.2	301.3	28.2	82.7	23.7	.0127	.858	1.690	3.725	1.2410	17.651
71.423	1015.2	301.2	28.0	82.4	28.5	.0153	1.030	2.027	4.472	1.5409	21.917
71.423	1015.2	300.9	27.7	81.9	37.5	.0199	1.347	2.654	5.846	2.1365	30.389
71.423	1015.2	300.6	27.4	81.3	46.8	.0246	1.667	3.283	7.239	2.8162	40.056
71.423	1015.2	300.1	26.9	80.4	56.3	.0296	2.005	3.947	8.702	3.5234	50.114
71.423	1015.2	299.5	26.3	79.4	65.8	.0343	2.328	4.583	10.104	4.3033	61.208
71.144	1011.2	299.2	26.0	78.8	74.1	.0385	2.610	5.137	11.330	5.0540	71.884
71.144	1011.2	298.8	25.6	78.1	82.8	.0437	2.918	5.745	12.665	5.9381	84.459
*****	*****	*****	******	******							
71.297	1014.4	300.1	26.9	80.5							
.138	2.0	.9	.9	1.5	DEVIATIONS						

TABLE 98

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

TEST NUMBER 11R PART B TEST DESCRIPTION

CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 100.2 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 415 PSIA (NOMINAL)

FLOWMETER CONDITIONS						TEST SPECIMEN INLET CONDITIONS		
FLOWMETER ONE			FLOWMETER TWO					
FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	FLOW RATE (ACFM)	PRESSURE (PSIA)	TEMP (DEG. F)	PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)
.81	[illegible]	7[illegible].3	.83	47.9	77.5	417.9	76.9	.0958
.78	[illegible].3	76.1	.81	48.5	77.3	416.6	76.7	.0944
.70	[illegible].5	75.8	.71	48.9	77.3	416.[illegible]	76.5	.0839
.60	[illegible].3	76.6	.61	49.3	77.3	416.[illegible]	76.5	.0724
.51	[illegible].7	76.6	.50	48.9	77.4	416.[illegible]	76.5	.0599
.42	[illegible].9	76.7	.41	49.3	77.5	416.[illegible]	76.6	.0492
.32	[illegible].3	75.7	.30	49.9	77.6	416.[illegible]	76.6	.0373
.27	[illegible].3	75.6	.26	49.9	77.7	416.[illegible]	76.7	.0315
.22	[illegible].3	76.6	.21	50.1	77.8	416.[illegible]	76.9	.0256
.15	[illegible].9	76.3	.14	49.9	78.1	416.6	77.2	.0173
.15	[illegible].7	76.8	.14	49.5	78.4	417.3	77.6	.0172
.22	[illegible].9	76.8	.21	49.5	78.4	417.3	77.6	.0258
.27	[illegible].9	76.7	.26	49.5	78.4	417.3	77.5	.0317
.32	[illegible].9	76.6	.31	49.5	78.4	416.6	77.5	.0373
.42	[illegible].9	76.4	.41	49.3	78.2	416.6	77.3	.0489
.51	[illegible].5	76.3	.51	49.3	77.9	412.1	77.1	.0615
.60	[illegible].1	76.3	.60	49.1	78.1	16.[illegible]	77.2	.0719
.70	[illegible].1	76.3	.71	48.7	77.9	415.3	77.1	.0838
.78	[illegible].9	76.8	.81	48.3	78.1	414.7	77.5	.0941
.79	[illegible].1	77.4	.81	48.3	78.3	414.0	77.8	.0950

TABLE 98

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 7/8/76

TEST NUMBER 11P PART B

TEST DESCRIPTION: CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 100.2 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 415 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS

PRESSURE (PSIA)	AVG TEMP (DEG. F)	AVG FLOW RATE (ACFM)	GROSS DIFF. PRESS PRIMARY (PSID)	GROSS DIFF. PRESS SECONDARY (PSID)	AVG GROSS DIFF. PRESS (PSID)	TARE DIFF. PRESS (PSID)	NET DIFF. PRESS (PSID)
417.2	76.9	.0958	309.725	309.725	309.725	.001	309.724
416.8	76.7	.0944	297.083	297.083	297.083	.001	297.082
416.0	76.5	.0889	218.388	218.388	218.388	.001	218.387
416.1	76.5	.0724	164.976	164.976	164.976	.001	164.975
416.0	76.5	.0599	120.414	120.414	120.414	.000	120.412
416.0	76.6	.0492	89.252	89.757	89.505	.000	89.503
416.0	76.6	.0373	60.641	61.313	60.977	.000	60.976
416.0	76.7	.0315	48.471	48.987	48.729	.000	48.728
416.1	76.9	.0256	38.156	37.745	37.951	.000	37.950
416.0	77.2	.0173	24.056	23.709	23.882	.000	23.881
417.2	77.6	.0172	23.495	23.536	23.516	.000	23.515
417.2	77.6	.0258	37.599	37.631	37.615	.000	37.613
417.3	77.5	.0317	48.471	48.987	48.729	.000	48.728
416.9	77.5	.0373	59.763	60.681	60.222	.000	60.221
416.0	77.3	.0489	86.554	87.545	87.050	.000	87.048
412.1	77.1	.0615	118.517	118.517	118.517	.001	118.516
416.9	77.2	.0719	161.816	161.816	161.816	.001	161.814
415.2	77.1	.0838	217.124	217.124	217.124	.001	217.122
414.1	77.5	.0941	298.031	298.031	298.031	.001	298.030
414.0	77.8	.0950	310.673	310.673	310.673	.001	310.672

TARE DIFF. PRESS = -3.40000E-05 + -4.44000E-04 (ACFM) + 1.50933E-01 (ACFM)**2 + 0 (ACFM)**3

TABLE 98

FLOW RATE VERSUS DIFFERENTIAL PRESSURE

DATE: 7/8/76

TEST NUMBER 11R PART R

TEST DESCRIPTION: CONTAMINATED CONDITION-FLOW RATE VERSUS DIFFERENTIAL PRESSURE, TOTAL OF 100.2 mg OF SYNTHETIC CONTAMINANT ADDED. TEST SPECIMEN (S/N 020) INLET PRESSURE 415 PSIA (NOMINAL)

TEST SPECIMEN INLET CONDITIONS										NET DIFFERENTIAL PRESS	
PRESSURE		TEMPERATURE			FLOW RATE						
KG/SQ CM	PSIA	DEG. K	DEG. C	DEG. F	LITERS/MIN	ACFM	SCFM	GN2 KG/HR	GN2 LBS/HR	KG/SQ CM DIFFERENTIAL	PSID
29.384	417.2	298.1	24.9	76.9	75.8	.958	2.688	5.294	11.670	21.7758	309.724
29.293	416.9	298.0	24.8	76.7	74.6	.0944	2.643	5.204	11.472	20.8869	297.082
29.247	416.x	297.9	24.7	76.5	65.9	.0839	2.345	4.618	10.182	15.3541	218.387
29.247	416.	297.9	24.7	76.5	56.8	.0724	2.025	3.987	8.790	11.5989	164.975
29.247	416.x	297.9	24.7	76.5	46.8	.599	1.674	3.299	7.267	8.4658	120.412
29.247	416.x	297.9	24.8	76.6	38.2	.0492	1.376	2.709	5.972	6.2927	89.503
29.247	416.x	298.0	24.8	76.6	28.9	.0373	1.044	2.055	4.531	4.2870	60.976
29.247	416.x	298.0	24.8	76.7	24.3	.0315	.882	1.739	3.827	3.4259	48.728
29.247	416.x	298.1	24.9	76.9	19.7	.0256	.715	1.407	3.102	2.6682	37.950
29.293	416.9	298.3	25.1	77.2	13.1	.173	.485	.954	2.103	1.6790	23.881
29.338	417.x	298.5	25.3	77.6	13.0	.0171	.481	.948	2.090	1.6532	23.515
29.338	417.x	298.5	25.3	77.6	19.7	.0258	.721	1.420	3.130	2.6445	37.613
29.338	417.x	298.5	25.3	77.5	24.4	.317	.888	1.748	3.853	3.4259	48.728
29.293	416.9	298.4	25.3	77.5	28.8	.0373	1.043	2.055	4.526	4.2339	60.221
29.293	416.9	298.3	25.2	77.3	38.0	.0489	1.368	2.694	5.940	6.1201	87.048
28.973	412.1	298.2	25.0	77.1	48.2	.0615	1.702	3.350	7.386	8.3325	118.516
29.247	416.	298.3	25.1	77.2	56.4	.0719	2.009	3.955	8.720	11.3767	161.814
29.201	415.x	298.2	25.1	77.1	65.8	.0838	2.335	4.598	10.138	15.2652	217.122
29.155	414.x	298.4	25.3	77.5	74.0	.0941	2.618	5.159	11.366	20.9536	298.030
29.110 *****	414.x *****	298.6 *****	25.5 ******	77.8 ******	74.3	.0950	2.636	5.190	11.441	21.8424	310.672
29.249	416.x	298.2	25.0	77.1							
.058	.0	.2	.2	.4	DEVIATIONS						